New Jersey Broadband Mapping Project:

Methodology Report on Data Integration and Validation Procedures For April 2011 Submission

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Data Processing: Collection, Reception, Loading, Validation

This document presents a description of the process used by the New Jersey Office of Information Technology (OIT) and Telcordia Technologies to collect, receive, load, validate and verify broadband availability and usage data submitted to us by wireless and wireline service providers, CAIs, and other sources and organizations for the State of New Jersey. Individual provider data reports attached hereto provide details on each provider's submission and explain how the policies presented in this document were applied to the data. The CAI summary report, also attached, provides details on the CAI data processing. This report also describes some of the complexities and challenges we have encountered to date in this project.

1 Structure of this Report

This methodology report consists of the following

- Section 2 summarizes our outreach efforts to collect data
  - This section also describes some of the challenges in determining what service providers are in and out of scope for this work and what constitutes a reseller
- Section 3 provides an overview of our process for Service Provider Data Reception
- Section 4 provides an overview of our process for Service Provider Data Loading
- Section 5 provides an overview of our process for Data Validation
  - This section includes a table of business rules and how they were implemented.
- Section 6 illustrates a few of our challenges in geocoding.
- Section 7 describes results from our limited longitudinal study of service provider plans for a couple of service providers.
- Appendix A: NJ Provider Data Reports
  - This appendix concatenates 30 files in Microsoft Word format, one file for each provider whose data was included in the submission. Each report provides a narrative describing the steps involved in collecting, verifying, loading, and validating the provider data, including a log of the interactions with the provider.
- Appendix B: CAI Processing Report
  - This is a summary of the details of the CAI processing for this submission.

2 Data Outreach

2.1 Provider Data Outreach

Telcordia and OIT have contacted around 70 providers via email and telephone to determine their status with respect to this project. Our interactions included questions such as: Do they meet the NOFA definition of a current broadband facilities-based service provider in the state of New Jersey? Are they a reseller[1]? Are they willing to participate in the program? OIT continues to negotiate NDAs with those providers who require them. Providers are given instructions on data requirements, including how to submit via our custom-designed Web site found at http://connectingnj.state.nj.us/.

Most providers were willing to participate, although several expressed concerns about the burdens of the data collection process. One provider – Hotwire Communications -- declined to devote any effort to submitting data; a second provider – Cogent Communications -- instructed Telcordia to retrieve information from the company's web site. The large national providers clearly have processes in place to collect and submit data, while the small local providers require greater assistance. Telcordia offers assistance where possible, allowing providers to submit whatever data they have available in any convenient format. This increases the complexity of the data collection and processing operations, but enables greater coverage of providers. As examples, some smaller wireline providers simply submitted a list of addresses where they offer service and some small cable operators submitted the names of the municipalities they cover.

At the NTIA's request, we re-contacted three satellite providers to determine if they had more specific data on their coverage: Hughes, Starband and Wildblue. For the fall 2010 submission, these three satellite providers were not

[1] We have been using a general, layman's definition of a Reseller.

included, but they were added in this round. Two additional non-satellite providers are also included in this round: Broadview and Xchange.

Our initial company list comes from FCC aggregate Form-477 data that we receive under the Form-477 sharing arrangement. Two areas that need further investigation are the sufficiency of this data for identifying potential in-scope service providers and related issues associated with resellers. Specifically:

- We would encourage the NTIA to develop a precise definition of a reseller as soon as possible and, ideally, by May 30. Clear guidelines on how to accurately identify resellers, and how to unambiguously determine which resellers are in-scope for this project, is important for the fall 2011 submission.
- The NOFA definition of an in-scope service provider is complex and can be very difficult to apply. Many times we have had rather lengthy discussions with potential providers as we parse the definition of facilities-based and the 7-10 day service provision window.
    - Here is an interesting example: Telcordia's broadband service provider is Savvis Communications Corporation. Savvis has an FRN number – 013780044 – but is not included on the aggregate Form-477 data for New Jersey. Because we were curious, we contacted Savvis through our account executive and inquired. We received the following response on April 4 from their Counsel: "The products and services we offer generally qualify as information services or non-common carrier services and are therefore not subject to federal regulation, including Form 477 requirements." This anecdote raises a number of questions, including how the program scope aligns with Form-477 filers.
- There are numerous sources of potential information on broadband service providers -- who may or may not meet the NOFA definition of facilities-based and the 7-10 day service provision interval. As just one example, the Broadband Internet Directory (http://broadband.theispguide.com/) is a consumer website that lists broadband offerings and plans. Under the area code for Telcordia's location in Piscataway, NJ, dozens of providers[2] are listed, the majority of whom offer DSL options and are unfamiliar to us.
- Due to the combination of a potentially very large number of resellers and a lack of clarity on the definition of a reseller, we would argue that it is very important to develop clear goals and objectives around the inclusion of any providers that do not file Form-477 in this program.

The table below lists the 30 providers whose data was included in this submission and identifies those providers who were new in this round.

Provider Name	Data Verified and Submitted?
Advanza Telecom Inc	yes
AT&T Mobility LLC	yes
Broadview Network Holdings	yes
Cavalier Telephone Mid-Atlantic LLC	yes
CenturyTel, Inc. (CenturyLink)	yes
Cogent Communications Inc.	yes
Comcast Cable Communications, LLC	yes
CSC Holdings (Cablevision)	yes
DIECA Communications (Covad)	yes
Global Online Electronic Services	yes
Hometown Online	yes
Hughes Network Systems	yes (satellite, new this round)
Leap Wireless (also Cricket)	yes
Monmouth Telephone & Telegraph	yes
Netlogic (Voxitas)	yes
One Communications Corp	yes

[2] Interestingly, Savvis is not one of them.

RCN NY Communications	yes
Service Electric Cable, Hunterdon	yes
Service Electric Cable, Sparta	yes
Sprint Nextel	yes
StarBand Communications	yes (satellite, new this round)
Time Warner Cable	yes
T-Mobile	yes
tw telecom holdings	yes
Verizon	yes
Verizon Wireless	yes
Wave2Wave Communications	yes
WildBlue Communications	yes (satellite, new this round)
Xchange Telecom	yes (new this round)
XO Communications	yes

The table below lists providers who, based on initial screening and communications, were considered not in-scope for this program. In some cases, they were determined to be resellers based on our own internal definition; in other cases, they had not yet begun to offer service in New Jersey. These providers would be candidates for re-contact if and when we have a precise reseller definition and, importantly, clear scope and goals for inclusion of resellers in the program.

Company Name
Airespring, Inc.
American Telephone Company LLC
Atlantech Online, Inc.
Data Network Systems (DNS); Business Automation Technologies, Inc.
Eventis Telecom, Inc.
Global Crossing
Level 3 Communications; Wil Tel Communicationss; Broadwing Communications; TelCove Operations
Lightower Fiber Networks
Magellan Hill Technologies, LLC
Meriplex Communications
Metropolitan Telecommunications Holding Company
NetCarrier Telecom, Inc.
New Edge Network
Tata Communications (America) Inc.
Telecom Professionals, Inc.
Telefonica USA, Inc.
Towerstream, Inc.
Transbeam
Vocal IP Networx Ltd
World Discount Telecommunications

Zayo Group, LLC

2.2 CAI Data Outreach

Telcordia and OIT used a variety of means to collect Community Anchor institution data. We collected reference data with lists of CAIs of various types in the state and we collected broadband data from individual institutions via our website and from aggregated sources.

For each CAI category, the following table provides the number of records we obtained from the reference source, the number of broadband access records we obtained, the total number of records we submitted to the NTIA and the number of complete records, with verified address information and broadband access information.

CAI Category	Reference Records	Broadband Records	Total Records Submitted	Complete Records Submitted
School K-12 (Public)	2601	549 (230 of these records require further processing and verification)	2601	158
School K-12 (Private)	1260 (NCES)		1260	71
Libraries	427 (IMLS)	89	427	87 (2 library web submissions were unmatched)
Medical/Healthcare	111 (NJHA)	5	111	5
Public Safety	343 (NJ 911 Comm.)	99	343	88 (11 PSAP web submissions were unmatched)
University	157 (NCES IPEDS)	38 (NJEdge)	157	37 (1 entry for was unmatched)
Other – State Government		2700	500 (Remaining data to be analyzed and verified for next submission)	500
Other – Local Government	0	45	45	45
Other – Non Government	0	8	8	8

Abbreviations and Acronyms

911 Comm	New Jersey 9-1-1 Commission
IMLS	Institute of Museum and Library Services
IPEDS	Integrated Postsecondary Education Data System
NCES	National Center for Education Statistics
NJHA	New Jersey Hospital Association

New Jersey has a strong tradition of home rule and, like many eastern states, a plethora of small governance entities – towns, townships, boroughs, cities, and other local municipalities. Among the major challenges we face in collecting broadband CAI data in the state are the dearth of strong, state-level organizations that might compel members to provide data (as opposed to comparatively weaker coordinating bodies) and the lack of existing broadband data sources. NJEdge's data on the higher education institutions to which they provide service is one of the very few such resources in the state.

NJ OIT executives worked through state-level contacts in public safety, education and libraries, etc., to encourage their constituencies to participate and submit data through the website. While some groups were more responsive than others, many expressed concerns about placing additional burdens in a time of shrinking budgets and cutbacks.

We encountered a few issues with collection, interpretation and processing of CAI data:

- Some institutions provide information on multiple connections to the internet, each with its own technology of transmission and maximum speeds. These may represent separate redundant connections for a large institution that provides critical services or separate facilities for different classes of users (e.g., staff and clients). Our policy has been to submit a single entry for each institution, using the highest available download speed, but this policy may be a candidate for refinement.
- Satellite institutions such as branch libraries or campus outreach centers can complicate the CAI picture. Our policy is to attempt to collect data for each separate geographic location as a separate CAI.
- Sometimes multiple government offices are co-located in one geographic location; e.g., a large building or complex that may include county government offices, court, jail, and/or other government offices. Here the challenge is not to incorrectly overstate broadband capability or understate the need for broadband services.

3 Service Provider Data Reception

Telcordia defined a process for handling provider data upon receipt. The following steps describe that process:

These steps must be performed upon receipt of provider data. These steps set up the file system and database for later processing, including both the initial assessment and load, and protect the confidentiality of the information.

1. Update the provider interaction log spreadsheet with the date of receipt and other metadata.
2. Copy the email or decrypt the uploaded files to individual directory on dedicated and secure server.
3. Test that the files can be opened, read, etc. This may require using ESRI ArcCatalog to check a shapefile or file geodatabase.
4. Send an acknowledgement to the provider of receipt of readable submission, or request re-send as needed.
5. Create empty provider data report into the new folder, using the appropriate wireless or wireline template**.**
6. Connect to the PostgreSQL database and instantiate a schema for the provider
7. Import the NTIA transfer model tables to the new schema using ArcCatalog. These are available in the "ntiamodel" schema.
8. Add triggers to the newly imported tables. These triggers update columns with the user name and date/time for each insert and update.
9. Perform an initial evaluation on the submitted data, evaluating the completeness of the submission and the validity and reasonableness of the included values. Interact with provider to address any questions or issues.

4 Service Provider Data Loading

All providers are responding to the mandate to provide the different types of data that go into the various tables in the NTIA data transfer model. The provider data submissions vary in form, format and content and in the ease versus complexity of the processing and loading tasks.

In general, the most straightforward data to process are shape files submitted by wireless providers. Wireline providers who submit census block data are a step up in terms of complexity. Some cable providers simply list the municipalities which they serve. A number of smaller providers provide address lists corresponding to locations where they provide service. These are much more challenging to process as we must first manipulate the address information and then geo-code the locations; these operations can be time consuming and subject to inaccuracies.

The service provider reports attached in Appendix A give the full details per provider on all steps taken to extract, transform, and load the contents of the provider tables into the NTIA tables. Note that every NTIA table has a "shape" column where a geographic feature such as a point, line (e.g., road segment) or area (e.g., census block) must be submitted.

Here is a summary of some of our key policies and challenges:

- All non-disclosure agreements executed with providers prohibit us from disclosing customer addresses. Although some providers have not executed NDAs, we have chosen to treat all providers similarly. We have chosen to obfuscate the address data by transforming it to census blocks or street segments. This carries a slight risk of overstating coverage, but that seems more appropriate than simply dropping the data because it is sensitive.
- Speeds associated with address data from some providers represent the price plan chosen by the customer; they are definitely neither the max advertised speed nor the typical speed. Our decision was to keep the maximum speeds encountered in the census block and report them in the maximum advertised fields and to report typical as null. If customers' selections in neighboring census blocks were vastly different, we would use the highest speed in a (subjectively defined) area as the maximum advertised speed.
- Maximum advertised speed, combined with the 7-10 availability requirement, results in vagaries in interpretation. In particular, the concept of advertised speed is well suited for providers who offer services to extended areas, such as large telephone and cable television companies. Its application is less clear for smaller providers who offer service to defined set of specific addresses. They deliver services to those specific addresses, and could offer the same service to a new tenant within the time limit. In some cases, they could increase the speed within that time period as well. They could not easily deliver service to any neighboring location with a two-week period. We have operationalized the notion of maximum advertised speed by determining the maximum speed a provider could offer on the facilities they have in place at customer locations, then reporting that speed for census blocks or street segments. Please also see Section 7 for some additional comments on advertised speeds.
- After initial poor results in geo-coding the customer address lists provided by some cable providers who had no geo-spatial capabilities, we identified an alternate approach that leveraged the franchise-nature of cable television service in the state. We asked those cable TV providers to send us the list of municipalities that they are licensed to serve. We build the submission by locating the municipality shapes and using those shapes to find all census blocks contained within them. For large census blocks, we report all the TigerLine street segments that are contained within those blocks.
- For middle mile data, the exact definition of a connection point remains open to interpretation and requires further development. We are not completely sure that all providers interpret middle mile in the same fashion and do not have a clear enough picture ourselves to provide appropriate guidance or validation. Despite this, we have submitted the middle mile information that we received.

5 Data Validation

Incoming data was subjected to a number of validation checks. When incoming data failed a validation check, we first investigated our process to ensure that we were not inadvertently creating an issue. If the problem was determined to be with the submitted data, we notified the provider concerned and recorded the interaction in the provider data report as provided in Appendix A. Where possible, we impute missing data. We attempted to perform some data validation using the FCC speed-test data, but had limited success due to the sparseness of the coverage of the speed-test data. Here are a couple of observations:

- The use of 2000 census blocks caused some problems as we had some providers using 2009 Census Blocks. We applied corrections and interpolation to this data to use it.
- New Jersey placenames can be problematic. We validate against data from the following sources: State of New Jersey geographic information (https://njgin.state.nj.us/NJ_NJGINExplorer/DataDownloads.jsp), the Federal Government placename information (http://geonames.usgs.gov/domestic/download_data.htm), and the US Postal Service data (available for a fee).
- A survey of 3100 New Jersey households was conducted in November and December by Rutgers University as Telcordia's subcontractor under this program. Householders who responded that they were broadband users were asked who their service provider was and this was compared against service provider serving areas. 95% of the responses aligned with service provider information. In the remaining 63 cases, the survey respondents reported being served by a provider whose coverage area did not appear to cover that location. We continue to investigate these cases as we expect some may be due to address inaccuracies or geo-coding errors, whereas others may identify areas for improvement in service provider coverage.

We applied the business rules in the script supplied by the NTIA and other data-specific validations after the data were loaded into the tables. These were applied as a check on both the data supplied by the providers and on the process we used for data collections, reception and loading. The following tests were applied:

We checked uniqueness of the entries in each table, using the following definitions of uniqueness:

Layer	Unique key	Notes
Middle Mile	frn, latitude, longitude	
CAI	anchorname, address, transtech	
Census Block	frn, fullfipsid, transtech	
Street Segment	frn, tlid, transtech	Tlid is an internal column.
Wireless	frn,transtech, shape	

We also performed the following additional validations:

Layer	Validation Rules
Middle Mile	• Valid census block id within the state of New Jersey • Shape should not be empty • All check_submission rules
CAI	• Valid zip code • Shape should not be empty • Transtech should not be NULL • All check_submission rules
Census Block	• Valid census block id within the state of New Jersey • The area of a census block should be less than < 2 square Mile • Shape should not be empty • All check_submission rule
Street Segment	• Shape should not be empty • Street segment is present in a census block >= 2 square miles • All check_submission rule
Wireless	• Shape should not be empty • All check_submission_rule

The table below is a version of the Business Rules provided by NTIA with highlighted the rows to illustrate the tests that were performed on the data prior to submission.

1. Rules for Service Address and Overview were not implemented because we did not use the tables.
2. Legend

Rule is implemented
Rule is NOT implemented
There are issues implementing and/or understanding the rule

Business Rule	Layer?	Front End/Back End?	Notes
Provider Name / DBA / FRN must be consistent for all records in the entire state	Middle Mile	Back-end	Implemented by a foreign key
Ownership – valid value list of only 0 or 1	Middle Mile	Front-end	
Serving facility capacity – valid value list of only 1 – 6	Middle Mile	Front-end	
Serving facility type – valid value list of only 1 – 4	Middle Mile	Front-end	
REQUIRED COMBINATION BUSINESS RULE FOR serving capacity and serving type	Middle Mile	Front-end	Do not understand
Latitude – must be a positive decimal number greater than 13 and less than 72. Must have 6 decimal places populated.	Middle Mile	Front-end	The rule is dropped in the latest model. Process is to check latitude not between 38.7 and 41.4. The topology rule also would validate it.
Longitude – must be a Negative decimal number greater than -170 and less than -60 (Except for Guam). Must have 6 decimal places populated (right hand place cannot be 0)	Middle Mile	Front-end	The rule is dropped in the latest model. Process is to check longitude not between -75.6 and -73.8. The topology rule also would validate it.
Elevation – measured in ***feet***, must be a positive number between -282 and 20,320	Middle Mile	Front-end	The assumption is that number provided is in feet. The rule is dropped in the latest model.
Point (Combination of Latitude and Longitude must fall within the state awardee submitting the value	Middle Mile	Back-end	This is implemented in the topology rule
Require a FIPS Block code	Middle Mile	Front-end	This does not appear to be a front-end rule
Provider Name / DBA / FRN see Middle Mile	Service Address	Back-end	Not implemented since we do not use the service address table
FRN see Middle Mile	Service Address	Back-end	This rule is not clear
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology speed combinations (see below)	Service Address	Back-end	
Latitude business rules, see Middle Mile	Service Address	Front-end	
Longitude business rules, see Middle Mile	Service Address	Front-end	

Point (Combination) see Middle Mile	Service Address	Back-end	
The point must not list a higher technology code than the highest technology code provided in the service area overview for the same provider.	Service Address	Back-end	
The point must not provide a higher technology code than the highest technology code of any provider listed in the block (if the block is < 2 sq mi).	Service Address	Back-end	
Flag the point(s) if, the block is > 2 sq mi AND this block neighbors a block < 2 sq mi w/o service availability from any provider.	Service Address	Back-end	
The Point must be in a block which contains population.	Service Address	Back-end	
FIPS Block code	Service Address	Front-end	
BBService – valid value list	CAI	Front-end	
Latitude see Middle Mile	CAI	Front-end	The rule is dropped in the latest model. We check latitude not between 38.7 and 41.4. The topology rule also would validate it.
Longitude see Middle Mile	CAI	Front-end	The rule is dropped in the latest model. Process is to check longitude not between -75.6 and -73.8. The topology rule also would validate it.
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology speed combinations (see below)	CAI	Front-end	
Point (Combination) see Middle Mile	CAI	Back-end	
The CAI must not list a higher technology code than the highest technology code provided in the service area overview for the same provider.	CAI	Back-end	
The CAI must not provide a higher technology code than the highest technology code of any provider listed in the block (if the block is < 2 sq mi).	CAI	Back-end	
Flag the CAI(s) if, the block is > 2 sq mi AND this block neighbors a block < 2 sq mi w/o service availability from any provider.	CAI	Back-end	
If CAI must be in a block with other service.	CAI	Back-end	

The CAI must be in a block that contains population	CAI	Back-end	
Provider Name / DBA / FRN see Middle Mile	Census Block	Back-end	Implemented by a foreign key
FRN see Middle Mile	Census Block	Front-end	This rule is not clear. It is defined as back-end in other places
StateFIPS – valid value only	Census Block	Back-end	
CountyFIPS – valid value list only	Census Block	Back-end	
Tract	Census Block	Back-end	
Block	Census Block	Back-end	
CBYear – Valid value list is 2000 only	Census Block	Back-end	This column has been dropped
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology speed combinations (see below)	Census Block	Front-end	
Combination StateFIPS, CountyFIPS, Tract, BlockGroup, Block need to be in the acceptable range of blocks < 2 sq mi (we need to produce this list) for that state	Census Block	Back-end	
The block must touch (e.g. be a neighbor with) at least one other block < 2 sq mile with availability	Census Block	Back-end	
Is the dissolve of the Block data for speed the same as the service overview for speed for that provider?	Census Block	Back-end	
The block must contain population	Census Block	Back-end	
Provider Name / DBA / FRN see Middle Mile	Service Overview	Back-end	Implemented by a foreign key
FRN see Middle Mile	Service Overview	Front-end	This rule is not clear It is defined as back-end in other places
GeoUnit – valid value list only (County only)	Service Overview	Back-end	Pre-fill to county.
GeogUnitID – valid value list only	Service Overview	Back-end	Change to StateCountyFIPS (5 characters)
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology speed combinations (see below)	Service Overview	Front-end	
Speed business rule to check nominal weighted speed?	Service Overview	N/A	Service Overview is not used in this release
Provider Name / DBA / FRN see Middle Mile	Street Segment	Back-end	Implemented by a foreign key

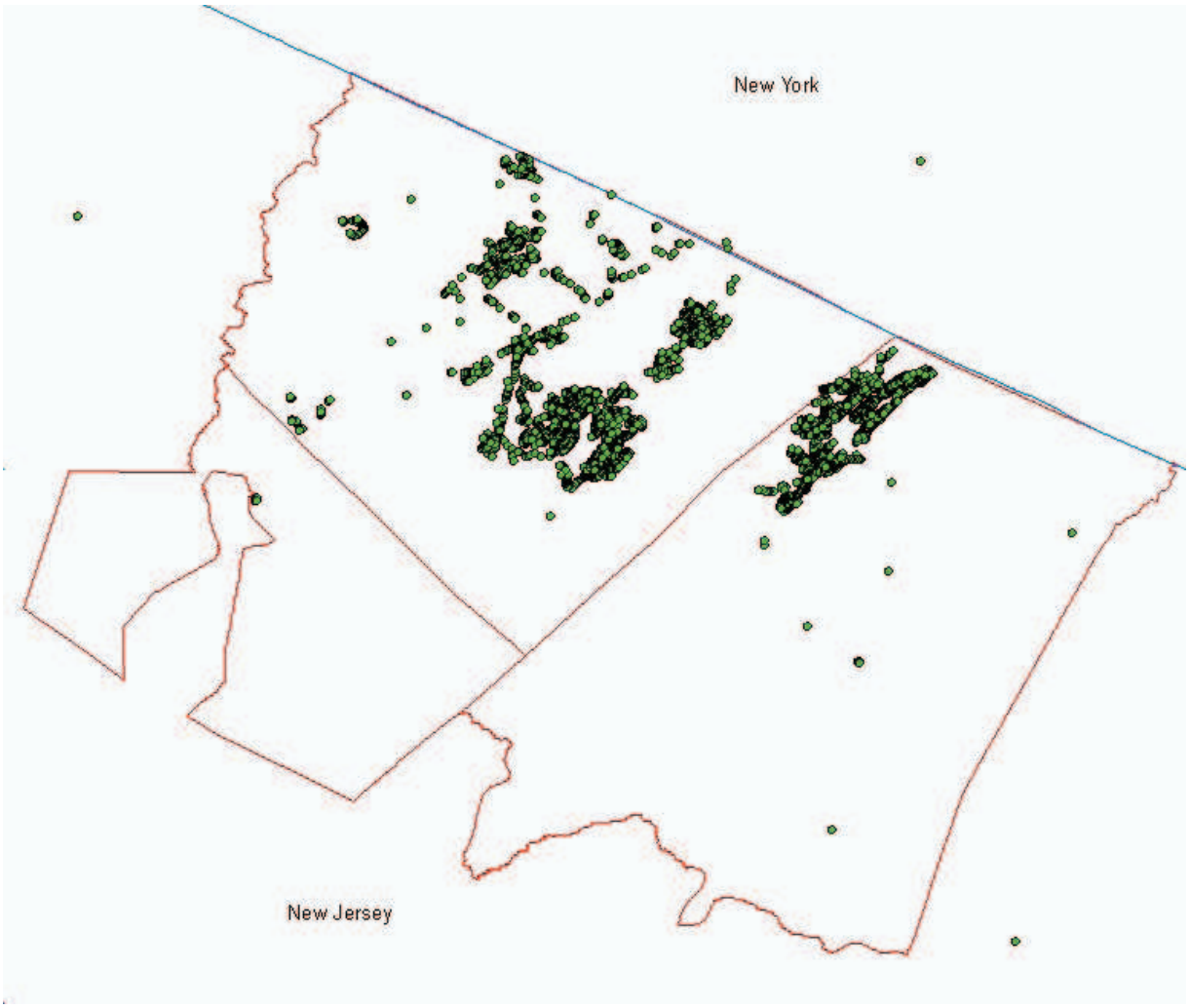
FRN see Middle Mile	Street Segment	Back-end	This rule is not clear
AddMin must be less than AddMax	Street Segment		
StateAbbrev – valid value list	Street Segment	Front-end	Check if stateabbr = 'NJ'
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology speed combinations (see below)	Street Segment	Front-end	
The data must be in a block > 2 sq mi?	Street Segment	Back-end	
Flag the data, if the data is in a block that does NOT neighbor a block < 2 sq mi with service (e.g. all neighbor blocks that are < 2 sq mi have no availability)?	Street Segment	Back-end	
Flag the data if there is no neighbor with block with availability?	Street Segment	Back-end	
Provider Name / DBA / FRN see Middle Mile	Wireless	Back-end	Implemented with a foreign key
FRN see Middle Mile	Wireless	Back-end	This rule is not clear.
TransTech – valid value list only	Wireless	Front-end	
REQUIRED COMBINATION BUSINESS RULE FOR transmission technology / spectrum / speed combinations (see below)	Wireless	Front-end	

6 Some Examples of Geo-coding Challenges

Address geocoding, particularly in census blocks greater than 2 square miles, has been challenging due to the quality of provider data, to problems in processing non Tiger Line reference data, and to ambiguities and errors inherent in address resolution. In the remainder of this section we provide some specific examples and pictures to illustrate these challenges.

6.1 Hometown Online

Hometown Online, a regional telephone company serving northern New Jersey, provided 6778 records of address data for the April submission which we geo-coded. Hometown also told us that their service area covered three specific municipalities. The screenshot below shows geocoded data as dots and the three municipalities as red polygons. As you can see, there are a couple of addresses geocoded to New York State as well as two addresses geocoded outside of the three municipalities. Time constraints did not permit us to cycle back to the provider to get clarification on these specific addresses, so they were omitted from the submission.



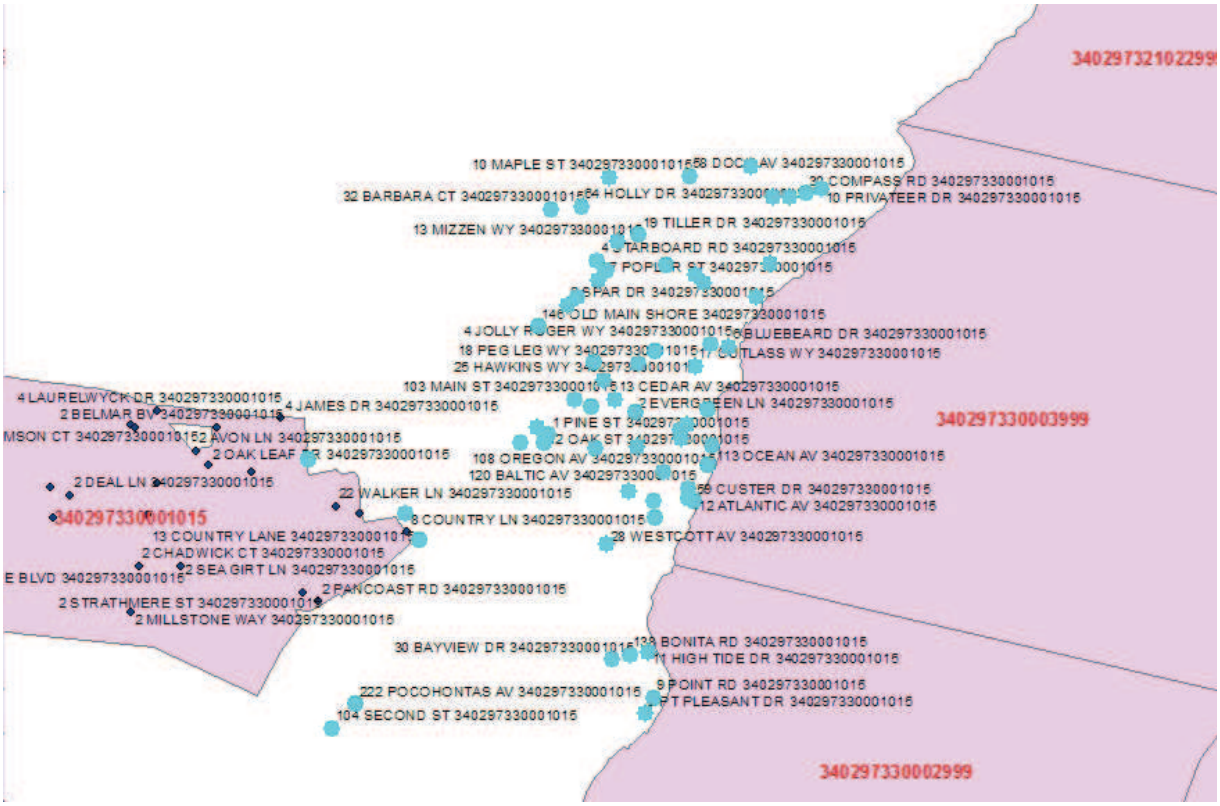
6.2 Comcast

One of the more complex cases we have dealt with is when a wireline service provider provides road segment data in text format for large census blocks without Tiger Line ID (TLID). Since the data are in text, there are no shapes. Comcast provided 1308 such road segment data with designated large census blocks, but without TLIDs; each data item had a starting and ending address number for the left and right side. We applied the following process:

a. Build addresses for geocoding from the line segment by selecting the first non-zero address number from the starting and ending address number of the left and right sides.
b. Geocode with the TIGER line: 807data items were successfully geocoded and 501 failed.
c. Spatial join the geocoded addresses with 2000 Census blocks and compare the spatial-joined census blocks with the provided census blocks.
d. Among 807 addresses, 530 had matching large census blocks; 12 mapped to a different large census block; and 265 mapped to small census blocks.
e. The overall success rate of this process is rather low – 530 correct matches out of 1308.

Given the low success rate, we worked with Comcast to obtain a list of municipalities they serve. They informed us, however, that in certain areas that approach would not produce an accurate picture of their coverage area. Where we had municipalities, we mapped these municipalities to census blocks; and then identified the road segments in the large census blocks in those regions. For the other areas of Comcast coverage, we used the small census blocks provided by Comcast, and omitted the street-segment data.

Below is a map that illustrates cases where one of the endpoints of line segments mapped to small census blocks rather than to large census blocks. The larger, sky blue dots indicate endpoints of street segments that mapped to small census blocks, indicated by the white background. The smaller, black dots indicate endpoints of street segments that mapped to correctly to large census blocks, which are shaded. While it is possible that some segments with one endpoint in a small census block may touch the large census block, in the majority of the cases shown, such is not the case.

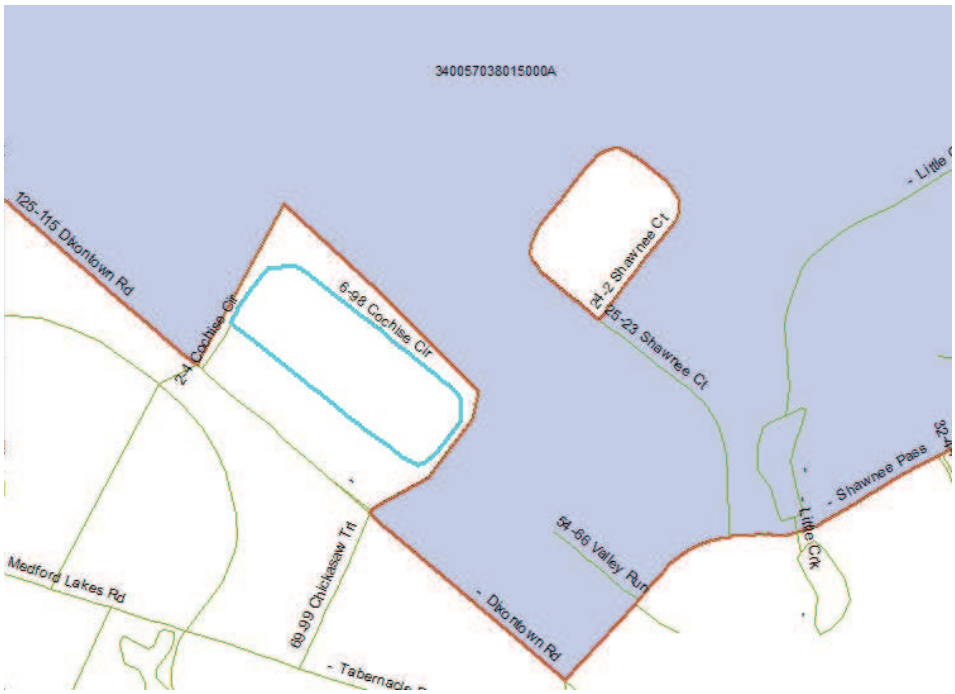


6.3 Verizon

Verizon provided line segment data for large census blocks with Tiger Line IDs. While this situation is certainly easier than that of Comcast discussed in Section 6.2, there were six cases where the TLIDs provided by Verizon for large census blocks actually mapped to small census blocks. In this case, we had adequate time to discuss with the provider and Verizon agreed that these line segments could be dropped.

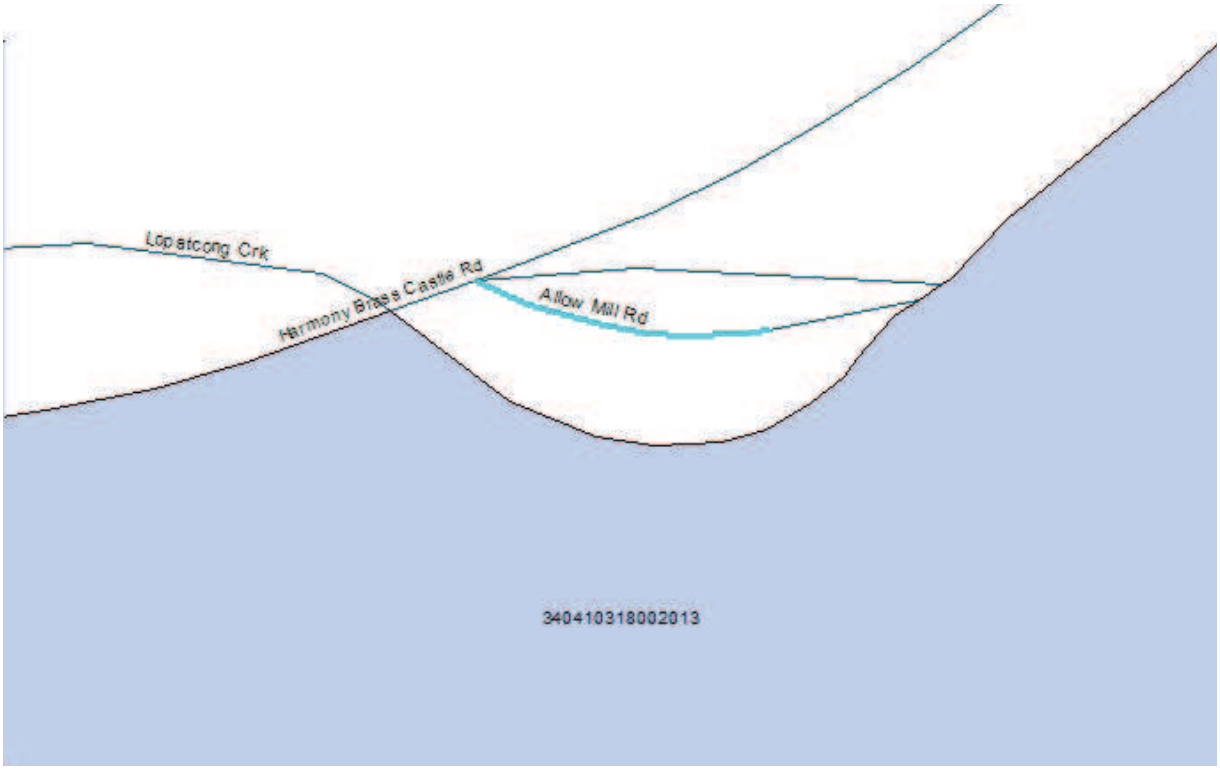
Below are pictures that illustrate a few of these anomalous cases. In the examples, the street segment identified by Verizon is indicated as an aqua line, the blue-shaded area is the large census blocks and the white, unshaded areas represent the small census blocks.

Example 1:	**TLID**	**FIPSID**	**Street**
	134097546	340057038015000A	Cochise Cir



Example 2:	**TLID**	**FIPSID**	**Street**
	203769459	340297360021005A	Main St

Example 3:	**TLID**	**FIPSID**	**Street**
	98114892	340410318002013	Allow Mill Rd



7. Limited Longitudinal Study of Service Provider Plans

We have been conducting a limited longitudinal study of wireline service provider plans. We began with a random stratified sample of about 20 addresses in the state. Each week we have gone to the websites of two major providers in the state – Verizon and Comcast – and noted the specific plans offered. This study, while clearly quite limited, has produced some intriguing findings regarding maximum advertised speeds, speed tiers, and change and evolution in service plans and pricing. Here are a few observations:

- Over the course of a year we have seen a shift in these providers from describing plans with a specific speed to describing them as either "up to" or with speed tiers. For example, where a plan had been previously defined as 3.0 Mbps upstream it may now be listed as 1.5 to 3 Mbps upstream.
- Most provider websites offer a wealth of information on what plans and speeds are offered on an address level as part of the consumer support and marketing. In some sense, these sites provide very accurate information on maximum advertised speeds at an address level. However, these sites typically have restrictions that limit or preclude the use of automatic tools or methods to capture information from them.
- As expected, service offerings evolve with various bundling opportunities, special offers, discounts and other promotions. These changes can be difficult to track due to the rapid rate of change and primarily impact affordability.
- Of more interest to this program are changes that reflect infrastructure upgrades. These are illustrated with, for example, the first introduction of FiOS, Verizon's fiber-to-the-home service, at some of the monitored addresses.

Appendix A

Broadband Provider Data Report

Provider: Advanza
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

1. NDA Status
2. Submission Overview
3. Submission File Details
4. Data Validations and Results
5. Data Transformation and Loading
6. Clarification Questions and Provider Responses
7. Notes and Open Issues

Section 1: NDA Status

Advanza states that NONE is required.

Section 2: Submission Overview

<table>
<tr><th colspan="5">AVAILABILITY DATA – RECEIVED AUGUST, 2010</th></tr>
<tr><td rowspan="5">ID</td><td colspan="3">Provider name</td><td>Advanza Telecom Inc</td></tr>
<tr><td colspan="3">“Doing business as” name</td><td>Advanza</td></tr>
<tr><td colspan="3">FRN</td><td>0017029141</td></tr>
<tr><td colspan="3">Holding Company Name</td><td>Advanza Telecom, Inc.</td></tr>
<tr><td colspan="3">Holding Company Number</td><td>180002</td></tr>
<tr><th colspan="5">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="4">1 xlsx spreadsheet</td></tr>
<tr><td>File size</td><td colspan="4">NJBB_0017029141_AddressLevelAvailability-20101231.xls file has 50 records representing 36 unique addresses</td></tr>
<tr><td>Speeds</td><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td><td rowspan="4">All provided speeds have code 4 (1.5 mbps ≤ BW < 3.0 mbps) for all records, which would make sense if all service is T1</td></tr>
<tr><td>Typical-upstream</td><td>X</td><td>address</td></tr>
<tr><td>Typical-downstream</td><td>X</td><td>address</td></tr>
<tr><td>Advertised-upstream</td><td>X</td><td>address</td></tr>
</table>

	Advertised-downstream	X	address	
	Subscriber-weighted-up	☐	Not provided	
	Subscriber-weighted-down	☐	Not provided	
Technology Type	Code 30 (= Other Copper Wireline) given for all records			
End-user specification	Values 2, 3 or 4 (Government, Small Business or Enterprises).			
Comments:				
INTERCONNECTION DATA – NO DATA PROVIDED				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received one file by secure upload to the connectingnj web site, file subsequently updated and delivered via email

Size	Name
72,192	NJBB_0017029141_AddressLevelAvailability-20101231.xls

The addresses in this file appear to be for individual customers (as opposed to addresses of multi-tenant buildings in a central business district).

Section 4: Validations and Results

All addresses were successfully geocoded using Arroyo flow Advanza_geocode_yahoo.arroyo invoking the Yahoo geocoder..

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from the file mentioned above. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to " Advanza Telecom Inc"
DBANAME	Not supplied; set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	Set to "0017029141"
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Tehcnology of Transmission (sic)
MAXADDOWN	As supplied in column Maximum Advertised Downstream Speed
MAXADUP	As supplied in column Maximum Advertised Upstream Speed
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

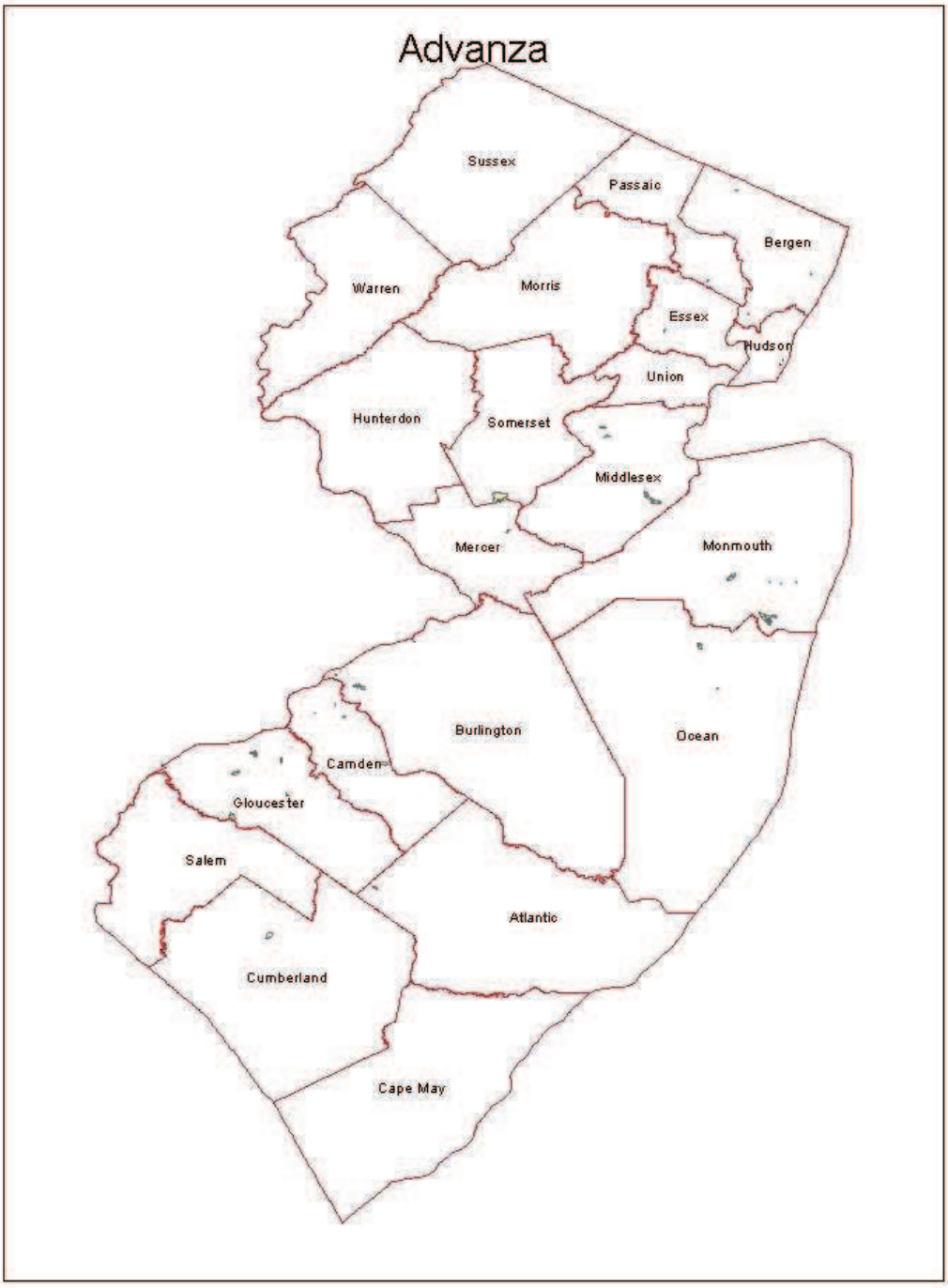
1. Geocoded the addresses using an Arroyo flow and the Yahoo geocoder, leaving the result with address and lat, long data in an Excel spreadsheet.
2. Imported the spreadsheed to a simple ESRI geodatabase table ("providerinput")
3. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option ("providerinput_shape")
4. Added a column containing the ID of the containing year 2000 census block using ArcCatalog's spatial join feature. The newly created point shapes are joined against census block shapes from reference data ("providerinput_shape_cb").
5. Discarded typical speeds since they were in all cases identical to maximum advertised speeds, not measured values.
6. Copied contents to the target data model table with the transformations specified above. Discarded 14 rows with duplicate census blocks.

Section 6: Clarification Questions and Responses

None required as part of initial review.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: ATT
Received: March1, 2011
Submission date: April, 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

8. NDA Status
9. Submission Overview
10. Submission File Details
11. Data Validations and Results
12. Data Transformation and Loading
13. Clarification Questions and Provider Responses
14. Notes and Open Issues

Section 1: NDA Status

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td rowspan="3">ID</td><td colspan="2">AT&T Mobility LLC</td><td>PROVIDER NAME</td></tr>
<tr><td colspan="2">AT&T Mobility LLC</td><td>DBA NAME</td></tr>
<tr><td colspan="2">FRN: 4979233</td><td>FRN</td></tr>
<tr><th colspan="4">FOR WIRELESS</th></tr>
<tr><td>Filetypes</td><td colspan="3">1 shapefile corresponding to NJ terrestrial 3G mobile wireless coverage (type 80)</td></tr>
<tr><td rowspan="6">Speeds</td><td>Type</td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)</td><td></td></tr>
<tr><td>Upstream max adv</td><td>yes (polygon)</td><td></td></tr>
<tr><td>Downstream max adv</td><td>yes (polygon)</td><td></td></tr>
<tr><td>Upstream typical</td><td>no</td><td></td></tr>
<tr><td>Downstream typical</td><td>no</td><td></td></tr>
<tr><td>Subscriber-weighted</td><td>no</td><td></td></tr>
</table>

Technology Type	Spectrum : yes	3 (PCS) and 1(Cellular spectrum)
Comments:		
INTERCONNECTION DATA		
ID		
File size		
Ownership		
Transport Type		
Data Rates/Capacity		
Location		
Comments: no IC data provided.		

Quick loading results:

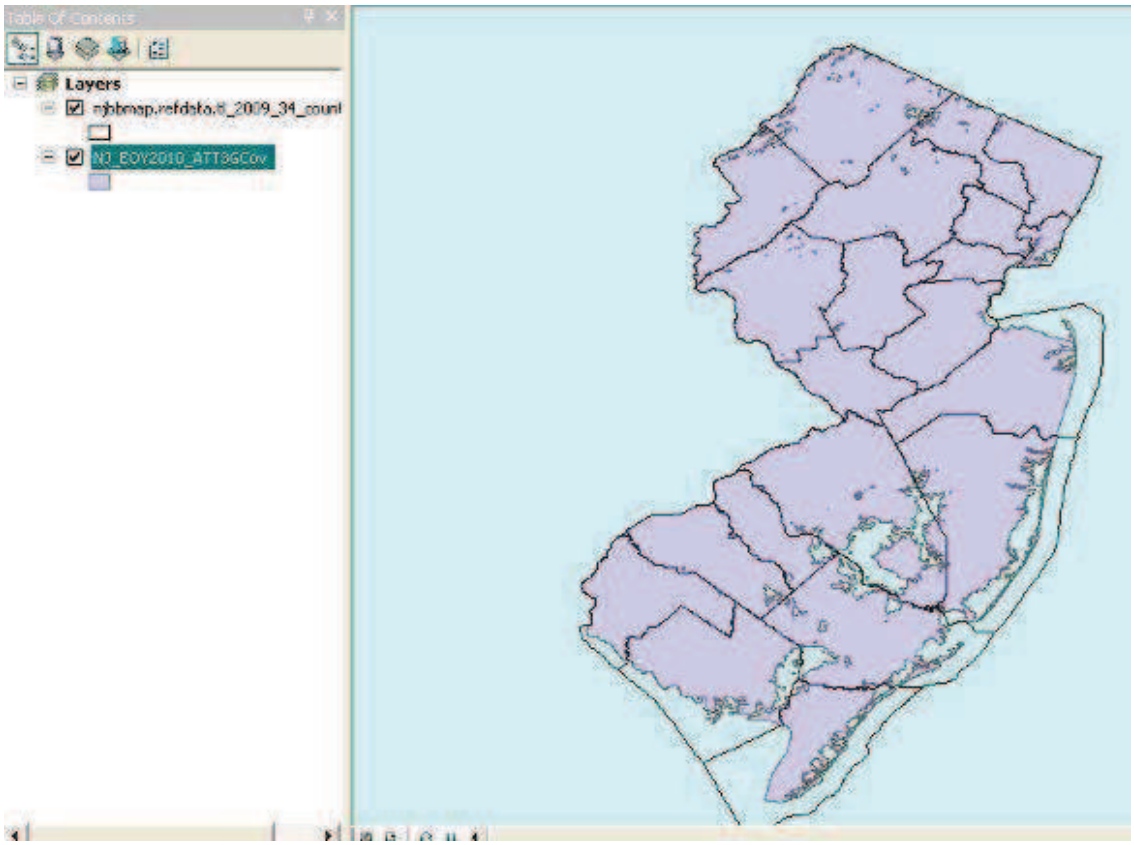


Figure 1. Loading results

Section 3: Submission File Details

1 zip file containing 5 files by (EMAIL, SECURE UPLOAD):

Size	Name
1KB	NJ_EOY2010_ATT3GCov.dbf
1KB	NJ_EOY2010_ATT3GCov.prj
1KB	NJ_EOY2010_ATT3GCov.shx
469KB	NJ_EOY2010_ATT3GCov.shp
9KB	ATT Mobility Response NJ December 2010.xlsx

Section 4: Validations and Results

(see above for initial load of shapefiles onto Arcmap)

Section 5: Data Transformation and Loading

Section 6: Clarification Questions and Responses

1. no typical up or down speeds
2. no subscriber weighted value

Section 7: Notes and Open Issues

Broadband Provider Data Report

Provider: Broadview Networks, Inc.
Received: September 2010
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

15. NDA Status
16. Submission Overview
17. Submission File Details
18. Data Validations and Results
19. Data Transformation and Loading
20. Clarification Questions and Provider Responses
21. Notes and Open Issues

Section 1: NDA Status

No NDA executed.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Broadview Networks Inc.
Broadview Networks
0003775285</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Excel spreadsheet</td></tr>
<tr><td>File size</td><td colspan="3">1,936 data rows</td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th></th><th>Address level data</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Customer speed choice listed</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Customer speed choice listed</td></tr>
<tr><td>Subscriber-weighted-nominal speed</td><td></td><td>Not provided</td></tr>
</table></td><td>Instead of max advertised, each service address price plan is shown.</td></tr>
<tr><td>Technology Type</td><td colspan="3">10 (ADSL), 20 (SDSL), 30 (Other Wireline)</td></tr>
</table>

End-user specification	Yes
Comments:	
INTERCONNECTION DATA	
ID	
File size	Excel spreadsheet with 31 rows
Ownership	Not provided
Transport Type	Code 2, copper
Data Rates/Capacity	Not provided
Location	Address provided
Comments:	

Section 3: Submission File Details

Received 2 files by secure upload:

Size	Name
514560	NJ Table 1 063010.xls
24576	NJ Table 8 - Middle Mile & Backbone Interconnection Point 063010.xls

Section 4: Validations and Results

Table 1 has 1,936 service addresses (with abbreviated town names and many missing zip codes), the technology speed tiers in service at each address, and the count of connections. Most records contain max advertised up/down speed codes, but over 100 do not. Records have no typical up/down speed and no specification of subscriber-weighted nominal speed. Table 1 shows no provider name, no DBA name, and no FRN. Geocoding succeeded for N of the addresses and failed for 628 addresses. Most of the addresses that failed geocoding have no street component, just a city name.

Table 8 has 33 middle-mile points, with addresses, CLLI codes, and the service facility type (all copper). There is no specification of ownership or facility capacity. Table 8 lists provider name, DBA name, and FRN. Geocoding succeeded for 32 of the addresses and failed for 1 ("Delsea Dr N & Focer St, Glassboro, NJ 08028, USA").

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from data supplied in the XLS sheet . The following table explains the necessary transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "Broadview Networks Inc."
DBANAME	Set to "Broadview Networks"
FRN	As supplied in column "FRN"
OWNERSHIP	Set to null, not supplied
BHCAPACITY	Set to null, not supplied
BHTYPE	As supplied in column "Serving Facility Type"
LATITUDE	Obtained by geocoding the address
LONGITUDE	Obtained by geocoding the address
ELEVFEET	Set to “0” (zero), not supplied
STATEABBR	Set to “NJ”
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

1. Geocoded the addresses to obtain Latitude, Longitude value pairs.
2. Created an excel sheet and imported to a geodatabase table.
3. Added a point shape corresponding to the Latitude, Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
4. Added a column containing the ID of the containing Year 2000 Census Block via a spatial join of the points and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

The standard NDA prohibits us from submitting address-level data to the NTIA. So we do not populate the table BB_Service_Address with the availability data. Instead, we discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

Loaded from supplied file of addresses after applying the corrections discussed below. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Broadview Networks Inc."
DBANAME	Set to "Broadview Networks"
PROVIDER_TYPE	Set to 1

FRN	Set to " 0003775285"
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology
MAXADDOWN	As supplied in column Max Advertised Upstream
MAXADUP	As supplied in column Max Advertised Downstream
TYPICDOWN	Set to null
TYPICUP	As supplied in column Typical Upstreatm Speed (sic)
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

7. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each.. Addresses that yielded results with accuracy of 6 or below were excluded; only intersection (7) or rooftop (8) accuracy is acceptable. The list of addresses that failed geocoding is available.
8. Created an Excel sheet and imported it to a geodatabase table.
9. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
10. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
11. Discarded 150 rows with no value for the maximum advertised download speed.
12. Discarded 383 rows with duplicate census blocks.
13. Loaded 1,377 census blocks.

NTIA Table BB_Service_RoadSegment

Loaded with street segments in census blocks larger than 2 square miles as gathered from Census Bureau TigerLine reference data. The following table explains the transformations that were applied to load the target table.

Table Column	**Data Source / Transformation**
PROVNAME	Set to "Broadview Networks Inc."
DBANAME	Set to "Broadview Networks"
PROVIDER_TYPE	Set to 1
FRN	Set to " 0003775285"
ADDMIN	From reference data
ADDMAX	From reference data
PREDIR	Set to null, not available in reference data
STREETNAME	From reference data

STREETTYPE	Set to null, not available in reference data
SUFFDIR	Set to null, not available in reference data
CITY	From reference data
STATECODE	Set to "NJ"
ZIP5	From reference data
ZIP4	Set to null, not available in reference data
TRANSTECH	As supplied in column Technology
MAXADDOWN	As supplied in column Max Advertised Upstream
MAXADUP	As supplied in column Max Advertised Downstream
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	From reference data

Internal processing notes:

1. Discovered all street segments that touch census blocks larger than 2 square miles using the census block list discovered as discussed for table BB_Service_Censusblock above.
2. Joined against reference data to discover street segment, for a total of 208 entries.

Section 6: Clarification Questions and Responses

1. The values you provided for the max. advertised up/down speeds appear to be the price plan choices. Do you want us to use these as your Maximum Advertised values?
2. Do you own or lease the facilities at the interconnection points you have listed?
3. You provided the service facility type for the middle-mile points but not the facility capacity. Would it be possible for you to provide this data.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 10:05 AM
To: 'jharper@broadviewnet.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: Broadview NJ Broadband data clarification

Jarrod,

We have reviewed the data you submitted to the NJ Broadband Mapping program and have a few clarification questions:

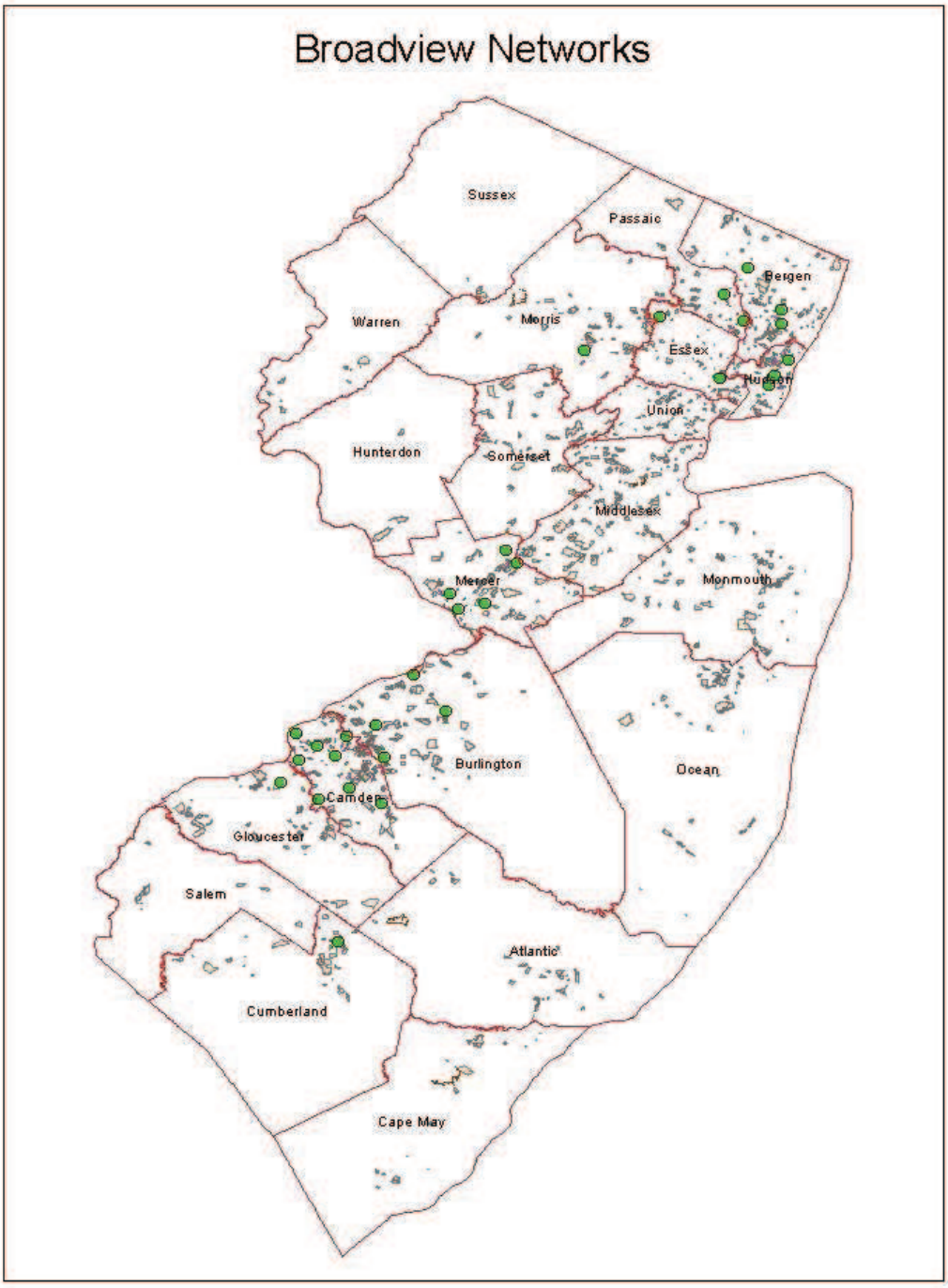
1. The values you provided for the max. advertised up/down speeds appear to be the price plan choices. Can we use the highest values as the Maximum Advertised speeds across all your locations??
2. Do you own or lease the facilities at the interconnection points you have listed?
3. You provided the service facility type for the middle-mile points but not the facility capacity. Would it be possible for you to provide this data.

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Cablevision
Received:
Submission date:

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

22. NDA Status
23. Submission Overview
24. Submission File Details
25. Data Validations and Results
26. Data Transformation and Loading
27. Clarification Questions and Provider Responses
28. Notes and Open Issues

Section 1: NDA Status

Executed with NJ OIT.

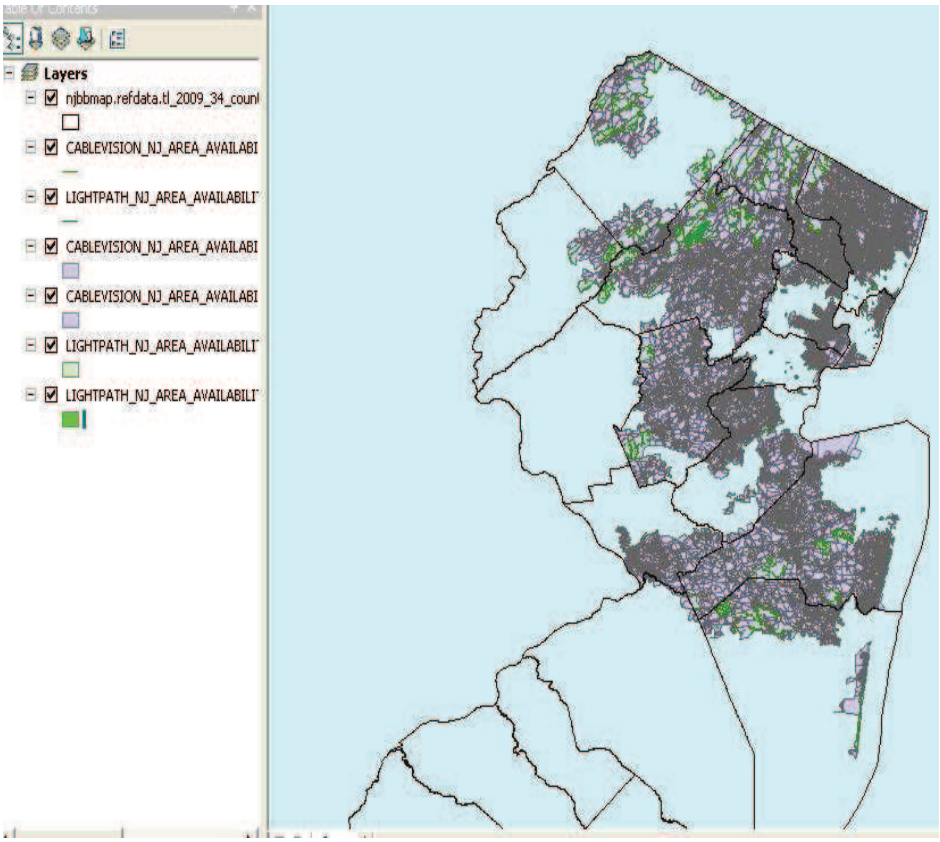
Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td rowspan="5">ID</td><td colspan="2">Provider name
“Doing business as” name
FRN
Holding company name
Holding company number</td><td>CSC HOLDINGS INC
CABLEVISION / LIGHTPATH
0003735909
CSC Holdings, Inc.
130370</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3">Shapefile with Census Block Year 2009 data</td></tr>
<tr><td>File size</td><td colspan="3">Multiple tables and shapes, for cable modem and optical (Lightpath) technologies.</td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Census block and street segment</td></tr>
<tr><td>Advertised-</td><td></td><td>Census block and</td></tr>
</table></td></tr>
</table>

	downstream		street segment	
	Subscriber-weighted-up		Not provided	
	Subscriber-weighted-down		Not provided	
Technology Type	40 (Cable Modem DOCSIS3.0), 41 (Cable Modem - Other), 50 (Optical carrier)			
End-user specification	Yes. Address data provided in 2 shape files (for both cable and optical) with street segment ID. (a field is called TLID, which is assumed means Tiger Line ID).			
Comments: Street data is comprised solely of polylines in the shapefile while the other files are polygons representing coverage. No subscriber weighted data found.				
INTERCONNECTION DATA: PROVIDED AFTER REQUEST				
ID	Data Interconnection Points Feb 2010.xls			
File size	17 KB, 5 records			
Ownership	Leased			
Transport Type	Fiber			
Data Rates/Capacity	Greater than 1 gbps			
Location	Provided addresses, only 1 is within NJ: 165 Halsey St, Newark NJ			
Comments: None.				

Figure 1. submitted data (quick load)

Overview of submitted data



Section 3: Submission File Details

Received one (1) file by SECURE UPLOAD. The zip archive contains six shapefiles: large census blocks (Cablevision and Lightpath), small census blocks (Cablevision and Lightpath), and one with roadsegments (Cablevision and Lightpath). The data and shapes appear to use Year 2000 Census Bureau geometry. The shapefiles use the XY Coordinate System GCS_North_American_1983.

Name	Size
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_GREATER_THAN_2MI.dbf	36 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_GREATER_THAN_2MI.prj	1 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_GREATER_THAN_2MI.shp	566 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_GREATER_THAN_2MI.shx	1 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_LESS_THAN_2MI.dbf	24,411 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_LESS_THAN_2MI.prj	1 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_LESS_THAN_2MI.shp	28,096 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_LESS_THAN_2MI.shx	422 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.dbf	5,159 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.prj	1 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shp	942 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shx	42 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.dbf	333 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.prj	1 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shp	58 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shx	3 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_GREATER_THAN_2MI.dbf	3 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_GREATER_THAN_2MI.prj	1 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_GREATER_THAN_2MI.shp	37 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_GREATER_THAN_2MI.shx	1 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_LESS_THAN_2MI.dbf	352 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_LESS_THAN_2MI.prj	1 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_LESS_THAN_2MI.shp	804 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_LESS_THAN_2MI.shx	7 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_GREATER_THAN_2MI.shp.N...	0 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2000_CENSUSBLOCKS_LESS_THAN_2MI.shp.NJBBM...	0 KB
CABLEVISION_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shp.NJBBMAP2-PC.448.371...	0 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_2009_TIGER_STREETS.shp.NJBBMAP2-PC.448.3716.s...	0 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_GREATER_THAN_2MI.shp.NJBBMAP2-P...	0 KB
LIGHTPATH_NJ_AREA_AVAILABILITY_CENSUSBLKS_LESS_THAN_2MI.shp.NJBBMAP2-PC.44...	0 KB

Section 4: Validations and Results

Feature class "CV_NJ_AR_AV_2009_TI_ST"

This road segment table has 1 duplicate shape.). The problematic TLID is

64454033 (Reservoir Dr); the record IDs are 50 and 187.

Feature class "LP_NJ_AR_AV_2009_TI_ST"
This road segment table has 1 duplicate shape. The problematic TLID is 64454033 (Reservoir Dr); the record IDs are 1485 and 3663.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from data supplied in the XLS sheet . Only one row describes a connection point in New Jersey. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "CSC HOLDINGS INC"
DBANAME	Set to "CABLEVISION"
FRN	As supplied in column frn_name
OWNERSHIP	Set to code 1, leased
BHCAPACITY	Set to code 4; 1gbps falls in range 600mbps – 2.4gbps
BHTYPE	Set to code 1, fiber
LATITUDE	Obtained by geocoding the address
LONGITUDE	Obtained by geocoding the address
ELEVFEET	Set to "0" (zero)
STATEABBR	Set to "NJ"
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

5. Created an excel sheet and imported to a geodatabase table.
6. Added point corresponding to the Latitude,Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
7. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.
8. Reused the table created for the October 2010 submission.

NTIA Table BB_Service_CensusBlock

Loaded from the two supplied feature classes (shapefiles) with census blocks less than 2 square miles. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column prvd_name
DBANAME	As supplied in column dba_name
PROVIDER_TYPE	Set to 1
FRN	As supplied in column frn_name
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from cb_fips (first 3 digits)
TRACT	Populated from cb_fips (next 6 digits)
BLOCKID	Populated from cb_fips
BLOCKSUBGROUP	Set to null
FULLFIPSID	As supplied in column cb_fips
TRANSTECH	As supplied in column tech_trans
MAXADDOWN	As supplied in column MaxAdvDown
MAXADUP	As supplied in column MaxAdvUp
TYPICDOWN	Set to null, not supplied
TYPICUP	Set to null, not supplied
SHAPE	As supplied in column shape

Internal processing notes:

1. Import the features with XY Coordinate System " GCS_North_American_1983" via the following three-step process. (A simple Import using ArcCatalog yields an incompatible tolerance value.)
    a. First, copy the data from the shapefile to the geodatabase using a geographic transformation “NAD_1983_to_WGS_1984_5”. This yields a feature class with the required coordinate system but an incorrect tolerance value. Names are "cb_nj_ar_av_lt_2mi" and "lp_nj_ar_av_lt_2mi".
    b. Second, create a new feature class with the same schema as the provided shapefile feature and the required coordinate reference system (GCS_WGS_1984) and tolerance (0.000000002 degrees). Names are "cb_nj_ar_av_lt_2mi_tol" and "lp_nj_ar_av_lt_2mi_tol".
    c. Third, load the data into the newly created feature class to ensure perfect compatibility with the required coordinate reference system and tolerance.
2. Ignored the column "tech_trans2" in the Cablevision feature class

NTIA Table BB_Service_RoadSegment

Loaded from the two supplied features with line segments. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column prvd_name
DBANAME	As supplied in column dba_name
PROVIDER_TYPE	Set to 1

FRN	As supplied in column frn_name
ADDMIN	Set to the least of the non-empty address numbers
ADDMAX	Set to the greatest of the non-empty address numbers
PREDIR	Set to null (no value supplied)
STREETNAME	As supplied (has all street components, not just name)
STREETTYPE	Set to null (no value supplied)
SUFFDIR	Set to null (no value supplied)
CITY	Set to null (no value supplied)
STATECODE	Set to “NJ”
ZIP5	Set to null (no value supplied)
ZIP4	Set to null (no value supplied)
TRANSTECH	As supplied in column tech_trans
MAXADDOWN	As supplied in column max_ad_dwn
MAXADUP	As supplied in column max_ad_up
TYPICDOWN	Set to null (no value supplied)
TYPICUP	Set to null (no value supplied)
SHAPE	As supplied

Internal processing notes:

1. Feature classes were imported exactly as discussed above for table BB_Service_CensusBlock.
2. Ignored the column "tech_trans2" in the Cablevision feature class.
3. Dropped 1,562 rows with empty street name, address min, address max values.
4. One data column in the Cablevision and Lightpath feature classes is named "tlid" which I interpret as "Tiger Line ID". I validated the data in the TLID column against Year 2009 Census Bureau reference data. All are valid values. (N.B. Although we are instructed to use Year 2000 Census geometry, this table has no data such as a Census block ID. The shapes are all valid ESRI objects so in this case it seems perfectly acceptable to use data from the Year 2009 Census Bureau reference set.)
5. ESRI validation reported that each input feature class has one duplicate (i.e., two rows with identical shapes. The two duplicate records were dropped, one from each input feature class.
6.

Section 6: Clarification Questions and Responses

1. No typical values supplied.
2. No subscriber weighted data.
3. no interconnection data.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 08, 2011 8:20 AM
To: 'tbaecher@cablevision.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: CSC NJBB Data Clarification

Ted,

We have performed our initial review of the data you submitted and we have two clarification questions.

1. Your recent submission did not include any middle mile information. Is the middle mile information you submitted last time still valid? If not, could you please supply us with updated information?
2. During the last submission you indicated that you did not compile any network or usage information that would allow you to calculate Subscriber Weighted Nominal Speed or Typical Speeds. Is this still the case?

We would appreciate your prompt response to these questions.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Theodore Baecher [mailto:TBAECHER@cablevision.com]
Sent: Tuesday, March 08, 2011 5:46 PM
To: ConnectingNJ@research.telcordia.com
Cc: Roxanne Smestad
Subject: Re: CSC NJBB Data Clarification

John-

With regard to #1, please see attached list.

With regard to #2, the answer is yes.

Please let me know if you have any questions.

Ted

Theodore J. Baecher
Managing Counsel, Legislation and Ethics
Cablevision Systems Corp.

tbaecher@cablevision.com
516-803-2388 (Office)
516-803-2667 (Fax)

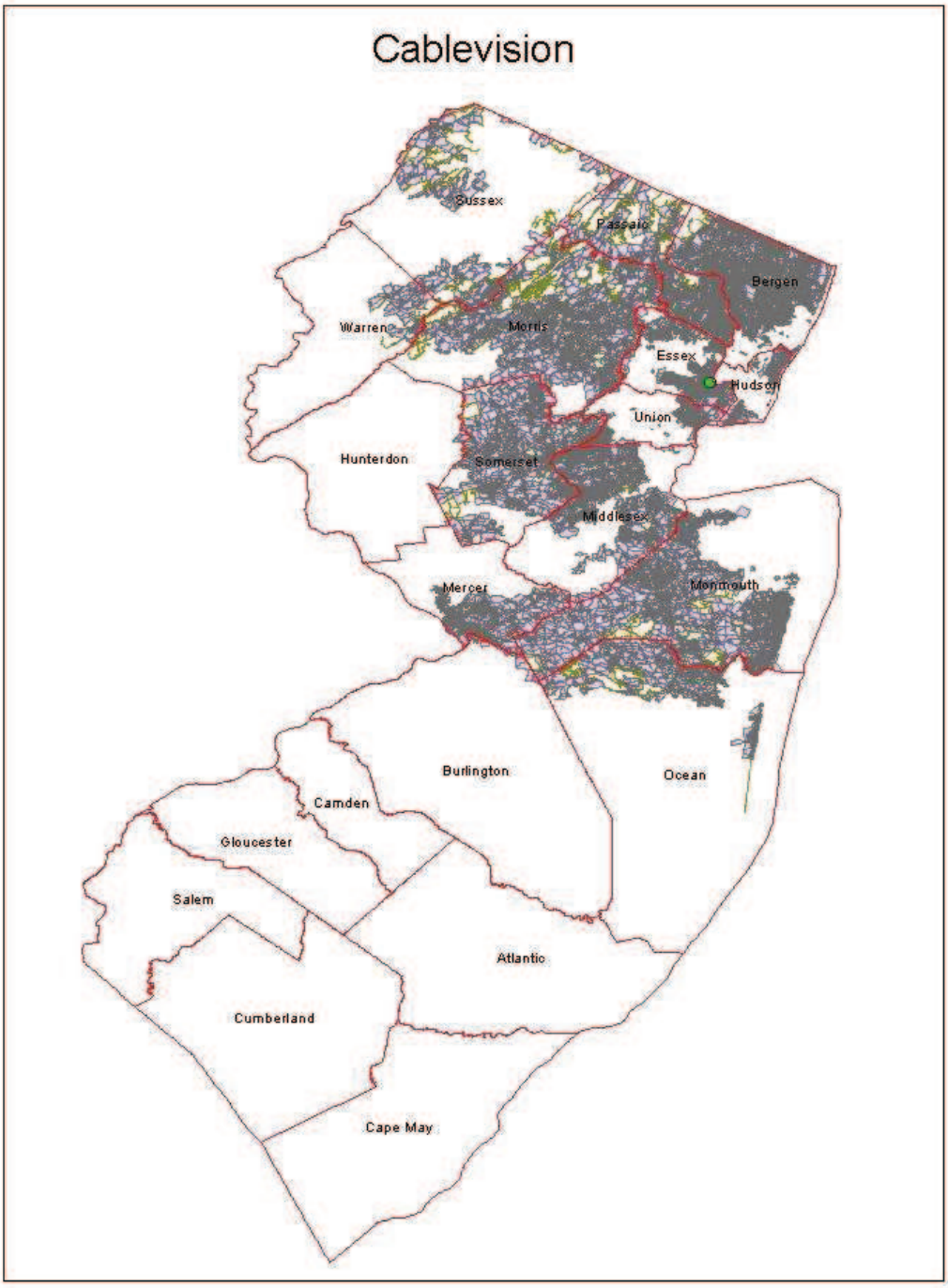
From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 18, 2011 10:41 AM
To: 'Theodore Baecher'
Cc: 'Roxanne Smestad'
Subject: FW: Cablevision Broadband Map Question

Ted,
Your email system rejected the email as being too large. It may have gotten through to Roxanne; I did not get any return mail from her. Please let me know if you need to arrange alternate delivery.
Also, the email that was returned had the following question:
I have one other question. The NTIA pulled data from the FCC and came up with the name CABLEVISION LIGHTPATH INC as being associated with the FRN 0003510195. Is that a valid name to use for your company?
John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Should we submit mixed-geometry street segments?

Section 8: Overview Map of Submitted Data



Connecting New Jersey - Broadband Provider Data Report

Provider: Cavalier Telephone Mid-Atlantic LLC
Submission date: April 2011

This report presents details on processing broadband data for delivery to the National Telecommunications and Information Administration (NTIA). This is a stub report, since data from the previous submission was reused unchanged. The complete report from the previous submission begins on the next page. Notable differences from the processing done on the previous submission are listed next.

NTIA Table BB_Service_CensusBlock

1. Column "reseller" was dropped.
2. Set the new column "provider_type" to value 1 ("Broadband provider as described in the NOFA")
3. Dropped non-measured typical up/down speed code values.

NTIA Table BB_ConnectionPoint_MiddleMile

1. No changes.

Provider Interactions

From: Ring, Margaret H. [mailto:mhring@cavtel.com]
Sent: Friday, March 04, 2011 1:03 PM
To: 'ConnectingNJ@research.telcordia.com'
Subject: RE: NJ BB Data Collection - Spring 2011

Cavalier Telephone has had no substantial changes to its broadband footprint since its last data submission. Please feel free to use the same data for this round of reporting. Let me know if you have any questions or concerns.

Regards,

Margaret Ring, Director
Regulatory
Cavalier Telephone
850.465.1748

Broadband Provider Data Report

Provider: Cavalier Telephone Mid-Atlantic LLC
Received: August 2010
Submission date: August 2010

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

29. NDA Status
30. Submission Overview
31. Submission File Details
32. Data Validations and Results
33. Data Transformation and Loading
34. Clarification Questions and Provider Responses
35. Notes and Open Issues

Section 1: NDA Status

It appears that the company executed an NDA with NJ OIT; the submitted data references an NDA.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Cavalier Telephone Mid-Atlantic LLC
No DBA name (confirmed with company)
0015-7991-33</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Excel (Cavalier NJ Broadband Response.xls)</td></tr>
<tr><td>File size</td><td colspan="3">52736 bytes; 122 records</td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Address</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Address</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Address</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Address</td></tr>
</table></td><td>Typical up speeds 3,4; down 5,6,7,7. Adv up speed 4, down 6. Note typical speed code that is greater than the max advertised speed code

Company clarified during October submission that the 7 typical speed should be a 6.</td></tr>
</table>

	Subscriber-weighted-up		Not provided	
	Subscriber-weighted-down		Not provided	
Technology Type	Initial submission included Codes 1 and 3. Provider clarified during October submission that these should be ADSL (1=10) and Other Copper Wireline (3-30).			
End-user specification	Codes 1 (residential) and 3 (small business).			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received 1 file by email.

Size	**Name**
52736	Cavalier NJ Broadband Response.xls

The file contains 124 rows and 122 data records for broadband availability by address, and 18 rows of middle-mile connection points.

Section 4: Validations and Results

Some of the address records (13) are post office boxes, which are invalid for this purpose.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from supplied file “Cavalier NJ Broadband Response.xls”, tab “Middle Mile Interconnection”. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “Provider Name”
DBANAME	Not supplied; set same as PROVNAME
FRN	As supplied in column “FRN”, after removing hyphens
OWNERSHIP	As supplied in column “Ownership”
BHCAPACITY	As supplied in column “Serving Facility Capacity”
BHTYPE	As supplied in column “Serving Facility Type”
LATITUDE	Created by geocoding the supplied address
LONGITUDE	Created by geocoding the supplied address
ELEVFEET	Set to “0” (zero)
STATEABBR	Set to “NJ”
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

9. Geocoded the addresses using the Google geocoder.
10. Created an excel sheet and imported to a geodatabase table.
11. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
12. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

The standard NDA prohibits us from submitting address-level data to the NTIA. So we do not populate the table BB_Service_Address with the availability data. Instead, we discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

Loaded from supplied file “Cavalier NJ Broadband Response.xls”, tab “Wireline Address-Level” after applying the corrections discussed below. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “Provider Name”
DBANAME	Not supplied; set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	As supplied in column “FRN”, after removing hyphens
STATEFIPS	Set to “34” (NJ)

COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology
MAXADDOWN	As supplied in column Max Advertised Upstream
MAXADUP	As supplied in column Max Advertised Downstream
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

14. Created a corrected spreadsheet based on response to questions, see next section.
15. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each.. Addresses that yielded results with accuracy of 6 or below were excluded; only intersection (7) or rooftop (8) accuracy is acceptable. The list of addresses that failed geocoding is available.
16. Created an Excel sheet and imported it to a geodatabase table.
17. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
18. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
19. Discarded 173 rows with duplicate census blocks while preserving the greatest speed.

The mechanized procedure for the three steps is described in file GeoExcel_proc.txt.

Section 6: Clarification Questions and Responses

1. What is the DBA name?
2. The tech trans codes 1 and 3 are not valid. Should technology of transmission code "1" really be "10" for ADSL? And about code 3, is that really 30?
3. Is the single record with a typical down speed of 7 a typo, possibly should be 6 to match the maximum advertised down speed?
4. One record (1151 N BLACK HORSE PIKE WILLIAMSTOWN NJ) is missing the zip code, which we believe should be 08094.
5. Thirteen records show an address that is a post office box. This is not a service address and we cannot work with these records. We need the service address instead of the billing address.

Questions sent 8/24/2010, Response received 8/24/2010

Hi John,
Sorry for any errors. Cavalier's answers/corrections are below. Let me know if you need anything further.

Thank you,
Margaret

Margaret Ring, Sr. Director
Cavalier Telephone
850.465.1748

From: NJ Broadband Data Collection
[mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, August 24, 2010 3:12 PM
To: Ring, Margaret H.
Cc: NJ Broadband Data Collection
Subject: NJBB Clarification Questions

Margaret,
We have been reviewing the data you submitted to the New Jersey Broadband mapping program. Based on our initial review, we have some questions for you that will help us better understand the data and process it accurately.

1. Does Cavalier Telephone have a specific "Doing Business As" name? The legal name of the entity is listed. There is no d/b/a.
2. The transmission technology codes that you submitted (1 and 3) are not valid. Should technology of transmission code "1" really be "10" for ADSL? And about code 3, is that really 30 (Other Copper Wireline)? Yes, ADSL (1=10) and Other Copper Wireline (3-30)
3. Is the single record with a typical downstream speed of 7 a error? Did you intend for it to be 6 to match the maximum advertised down speed? Our records do not indicate an error, but it is certainly an anomaly. Please correct to 6 for consistency.
4. One record (1151 N BLACK HORSE PIKE WILLIAMSTOWN NJ) is missing the zip code, which we believe should be 08094. Is this correct? Correct.
5. Thirteen records show an address that is a post office box. This information does not allow us to determine the location at which the service is available. Could you please provide the service address rather than the billing address? These locations do not have a physical address indicated in the data I was provided. Please delete the records with a post office box.

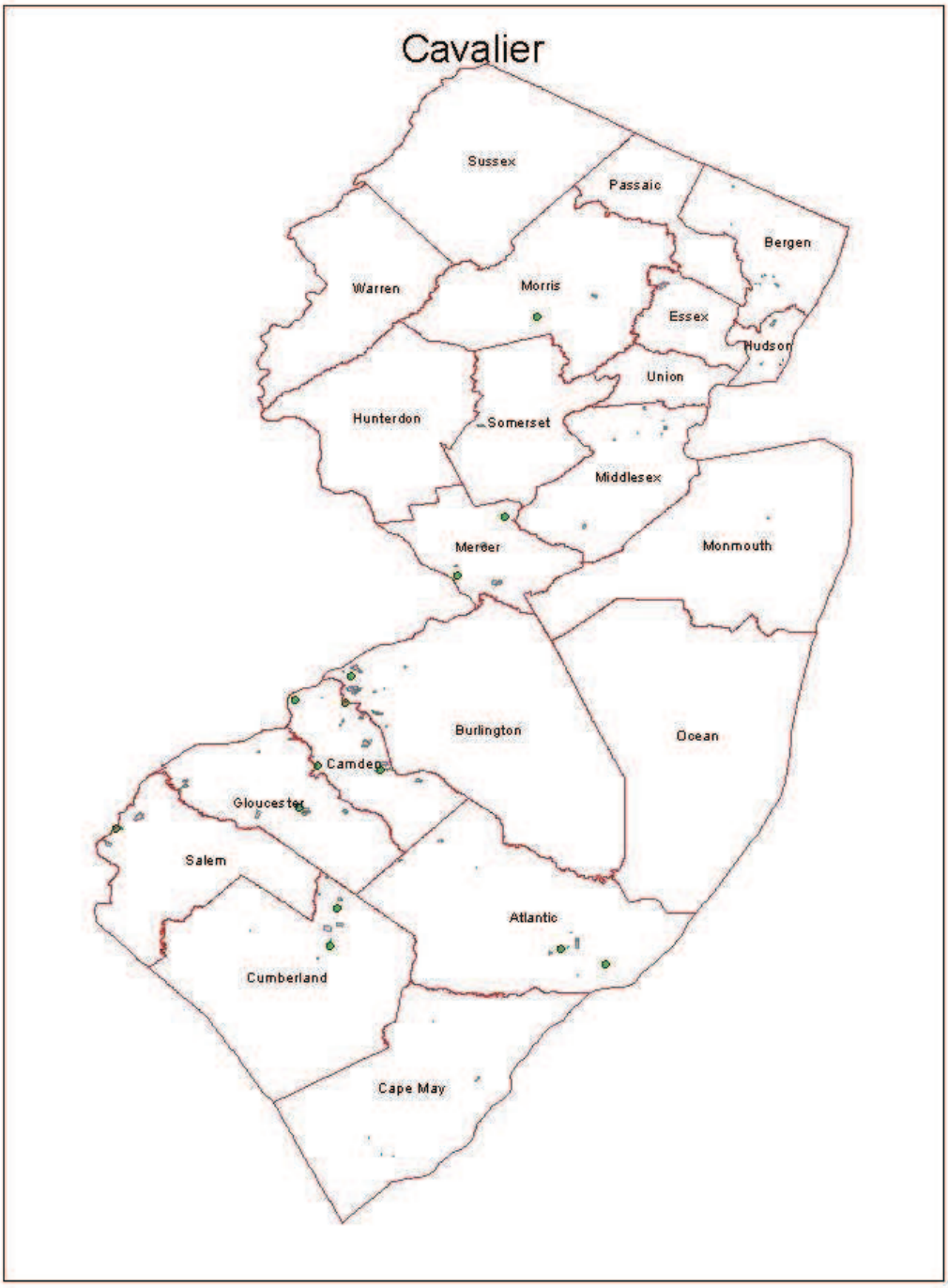
We would appreciate your prompt attention to these questions. If you need further clarification, please feel free to contact me.

Thank you for your participation!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: CenturyTel DBA Century Link
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

36. NDA Status
37. Submission Overview
38. Submission File Details
39. Data Validations and Results
40. Data Transformation and Loading
41. Clarification Questions and Provider Responses
42. Notes and Open Issues
43. Overview Map of Submitted Data

Section 1: NDA Status

Century Link executed an NDA with NJ OIT; the data files refer to the NDA.

Section 2: Submission Overview

<table>
<tr><th colspan="3">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td>Provider name
“Doing business as” name
FRN</td><td>CenturyLink, Inc. (per email)
Century Link
0018626853</td></tr>
<tr><th colspan="3">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="2">Text and shapefiles</td></tr>
<tr><td>File size</td><td colspan="2"></td></tr>
<tr><td>Speeds</td><td colspan="2">
<table>
<tr><th>Type</th><th></th><th>Spatial Resolution: county</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Census block and street segment (w. TigerLine REF)</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Census block and street segment (w. TigerLine REF)</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Census block</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Census block</td></tr>
<tr><td>Subscriber-weighted-</td><td></td><td>Not provided</td></tr>
</table>
</td></tr>
</table>

	up			
	Subscriber-weighted-down		County; all numbers are around 5000.	
Technology Type	10 (ADSL)			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: Not provided this submission (while it was last time)				

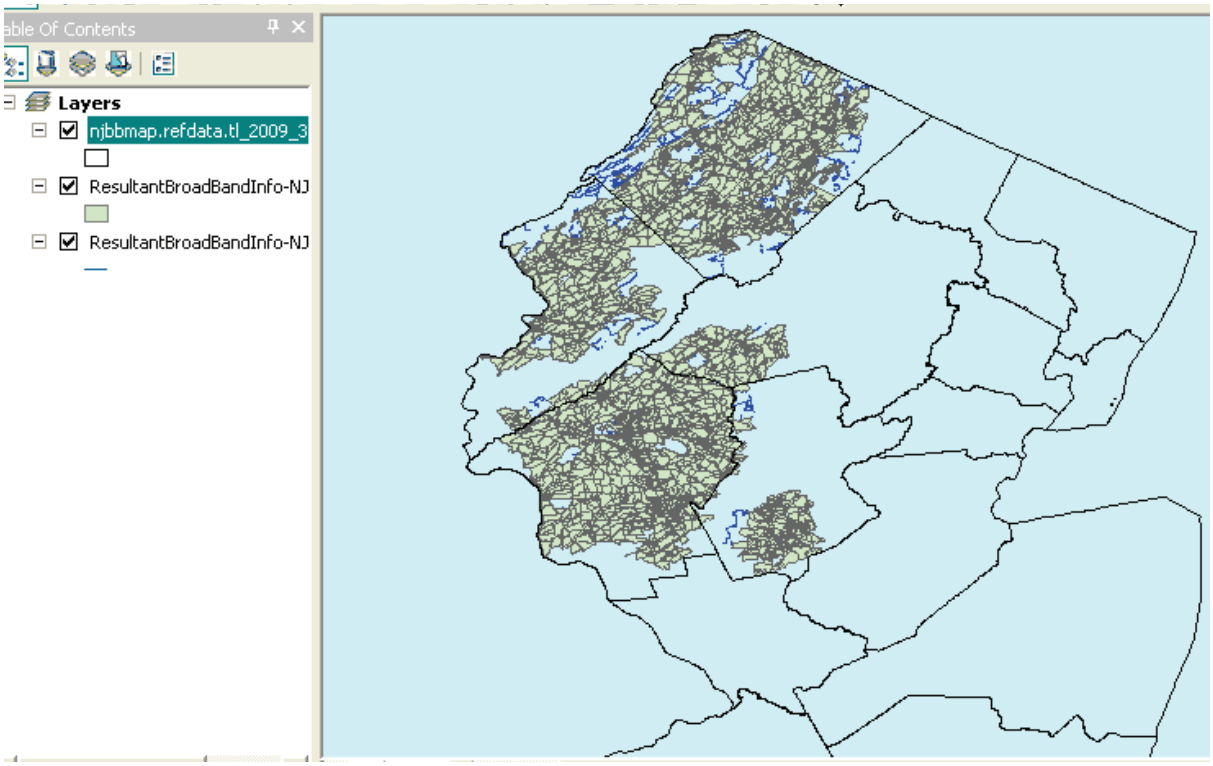


Figure1. Quick load test results

Section 3: Submission File Details

Size (kb)	Name
2702	CTL_NJ_sub_wtd_speed.txt
2219	NJ_BBavail.xls
1485	ResultantBroadBandInfo-NJ_polyline.dbf
1	ResultantBroadBandInfo-NJ_polyline.prj
836	ResultantBroadBandInfo-NJ_polyline.shp
35	ResultantBroadBandInfo-NJ_polyline.shx
2043	ResultantBroadBandInfo-NJ_region.dbf
1	ResultantBroadBandInfo-NJ_region.prj
3488	ResultantBroadBandInfo-NJ_region.shp
48	ResultantBroadBandInfo-NJ_region.shx

Section 4: Validations and Results

Initial check:

The overview data indicates this provider serves five counties in New Jersey. The county, state, and technology of transmission codes are valid. However, we will not populate the BB_Service_Overview in the April 2011 submission, so do not need the subscriber weighted nominal speed.

The large spreadsheet includes 10,476 rows with census block IDs. Additional columns have advertised and typical speeds at the census-block level. Some rows have road segment information (starting and ending addresses left and right); other rows have none. The spreadsheet seems to contain a mix of census block AND road segment information; the columns allow for both types of data in a row.

PROVIDER
DBA_NAME
FRN
CENSUS BLOCK
ADVERTISED MAX DOWNLOAD SPEED TIER
ADVERTISED MAX UPLOAD SPEED TIER
ADVERTISED TYPICAL DOWNLOAD SPEED TIER
ADVERTISED TYPICAL UPLOAD SPEED TIER
TECHNOLOGY

The shapefile has two feature classes:

Feature class ResultantBroadBandInfo-NJ_region appears to provide coverage data for census blocks with an area less than or equal to 2 square miles. It contains 6,113 records. All of the IDs shown in the shapefile correspond to valid Year 2000 Census Block IDs (although the column is named "2009") and all are smaller than 2 square miles.

Feature class ResultantBroadBandInfo-NJ_polyline shows street segments, we guess for census blocks larger than 2 square miles. It contains 4,362 records. The polyline data includes a field called TIGER_REF. We attempted to validate this as a Tiger Line ID against Year 2000 and Year 2009 line-segment reference data records, but none were matched, so we do not know what the column contains. We received an answer in response to email that the values are not TigerLine IDs.

The address left-from, left-to, right-from, and right-to fields are problematic because they are defined as numeric (not text) which precludes address such as those found in parts of NYC such as “12-26”. The fields of this polyline data include:
AREA_SQMI
PROVIDER, DBA, FRN, ID, LOCATION
CENSUS_BLOCK
MAX_DOWNLOAD, MAX_UPLOAD, TYPICAL_DOWN, TYPICAL_UP
TECHNOLOGY
TIGER_REF

The speed data gives cause for concern. We see significantly different maximum advertised speeds in adjacent census blocks. How is this possible? Further, the typical and maximum advertised columns are *always* identical. Maybe these data correspond to actual customer speed and price-plan choices rather than advertised speeds.

We do not require BOTH the spreadsheet and the shapefile.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from Excel Spreadsheet “middlemile_NJ.txt” (1 row) that was supplied for the October 2010 submission. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to “CenturyLink, Inc.” per email
DBANAME	As supplied in column 1 "CenturyLink"
FRN	Set to "0018626853"
OWNERSHIP	As supplied in column 3
BHCAPACITY	As supplied in column 4
BHTYPE	As supplied in column 5
LATITUDE	As supplied in column 6
LONGITUDE	As supplied in column 7
ELEVFEET	Set to “0” (zero)
STATEABBR	Set to “NJ”

FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

13. Created an excel sheet and imported to a geodatabase table.
14. Added point corresponding to the Latitude,Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
15. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.
16. Source table was reused from the previous submission.

NTIA Table BB_Service_CensusBlock

Loaded from supplied shapefile feature "ResultantBroadBandInfo-NJ_region". The following table explains the transformations that were applied to load the target table.

Table Column	**Data Source / Transformation**
PROVNAME	Set to "CenturyLink, Inc." per email
DBANAME	As supplied in column "dba_name"
PROVIDER_TYPE	Set to 1
FRN	Set to "0018626853"
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from 2009_Census_Block_FIPS_Code (1st 3 digits)
TRACT	Populated from 2009_Census_Block_FIPS_Code (next 6 digits)
BLOCKID	Populated from Census_Block_FIPS_Code (next 4 digits; dropped 5th character if present)
BLOCKSUBGROUP	Set to null
FULLFIPSID	First 15 digits of 2009_Census_Block_FIPS_Code See discussion of Census blocks below.
TRANSTECH	As supplied in column Technology_of_Transmission
MAXADDOWN	As supplied
MAXADUP	As supplied
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	As supplied

Internal notes on processing

1. The supplied feature class uses XY coordinate system name GCS_North_American_1983. The NTIA data model requires XY coordinate system GCS_WGS_1984. To change the projection we applied the geographic transformation NAD_1983_To_WGS_1984_5 (per ESRI KB article 24159).
2. We had to create a new feature class and reload the data so that the tolerance value matches the NTIA transfer model's tolerance value exactly.

3. The feature class "region" has 285 rows that duplicate existing census block IDs. We discarded these to avoid creating duplicate shapes in the table.
4. Some records show max download speed code 2, which is not considered broadband. We discarded 95 records with this value.

NTIA Table BB_Service_RoadSegment

Loaded from supplied shapefile feature “ResultantBroadBandInfo-NJ_polyline”. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “CenturyLink, Inc.” per email
DBANAME	As supplied in column “dba_name”
PROVIDER_TYPE	Set to 1
FRN	Set to "0018626853"
ADDMIN	Set to the least of the non-empty address numbers
ADDMAX	Set to the greatest of the non-empty address numbers
PREDIR	Set to null (no value supplied)
STREETNAME	As supplied (has all street components, not just name)
STREETTYPE	Set to null (no value supplied)
SUFFDIR	Set to null (no value supplied)
CITY	Set to null (no value supplied)
STATECODE	Set to “NJ”
ZIP5	Set to null (no value supplied)
ZIP4	Set to null (no value supplied)
TRANSTECH	As supplied
MAXADDOWN	As supplied
MAXADUP	As supplied
TYPICDOWN	Set to null
TYPICUP	Set to null
TKUD	As supplied in column tiger_ref
SHAPE	As supplied

Internal notes on processing:

1. The supplied feature class uses XY coordinate system name GCS_North_American_1983. The NTIA data model requires XY coordinate system GCS_WGS_1984. To change the projection we applied the geographic transformation NAD_1983_To_WGS_1984_5 (per ESRI KB article 24159).
2. We had to create a new feature class and reload the data so that the tolerance value matches the NTIA transfer model’s tolerance value exactly.
3. We discarded 609 records with no street name (field empty).
4. The county number and a column "tiger_ref" are supplied for each segment. We checked for uniqueness using the county number and tiger_ref. After discarding records with an empty street name, 2498 unique records were accepted and 1255 duplicates were dropped. However this is questionable. As mentioned in

validations, the tiger_ref column is not a TLID, so using it for validation might not be reasonable.

5. Some records show max download speed code 2, which is not considered broadband. We discarded 73 records with this value.

Section 6: Questions

1. subscriber weighted uplink speeds?
2. we should assume interconnection data same as last submission?
3. duplicate records in both shapefile features
4. imputed maximum speeds

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Thursday, March 17, 2011 4:35 PM
To: 'Bonsick, David'
Cc: 'ConnectingNJ@research.telcordia.com'
Subject: CenturyLink NJBB Data Clarification

Dave,

We have performed our initial review of the data you submitted and have a couple of clarification questions:

1. During the last cycle, you submitted the attached middle-mile data. Does that still represent your middle mile access points in NJ?
2. Your data has significant variation in the maximum advertised speeds across neighboring census blocks. This gives the impression that the data represents what customers signed up for, rather than what is advertised. On your Web site, I see 10Mbps as the highest speed. Is it reasonable to use that as your maximum advertised across all the areas you offer service?
3. The FCC FRN database lists your provider name as "CenturyLink, Inc." Is this correct?

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Flurer, Gerry F [mailto:Gerald.F.Flurer@centurylink.com]
Sent: Monday, March 21, 2011 10:25 AM
To: ConnectingNJ@research.telcordia.com
Cc: Bonsick, David
Subject: RE: CenturyLink NJBB Data Clarification

John: Dave Bonsick asked me to respond to your questions about the CenturyLink BB data for NJ.

1. I received our NJ middle-mile info this morning. See attachment.
2. Our data reports the top BB speed available in the census block – even if it is slower than our top speed promoted on our website, etc.
3. Our provider name is "CenturyLink, Inc."

Let me know if you have any other questions or would like clarification. Thanks.

Gerry Flurer
Voice: (913) 345-6413

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 23, 2011 10:09 AM
To: Flurer, Gerry F; Bonsick, David
Cc: ConnectingNJ@research.telcordia.com
Subject: Additional CenturyLink NJBB Data Clarification

Gerry and Dave,
We had an additional question regarding your NJ Broadband data submission. You provided a column tiger_ref in your street-segment data. The values in that column do not match Year 2000 nor Year 2009 TLID reference data. So, we do not know how to interpret the data. Could you please explain?

Thanks,

John

From: Flurer, Gerry F [mailto:Gerald.F.Flurer@centurylink.com]
Sent: Wednesday, March 23, 2011 11:17 AM
To: ConnectingNJ@research.telcordia.com; Bonsick, David
Subject: RE: Additional CenturyLink NJBB Data Clarification

That column was pulled from our MapInfo StreetPro Enhanced Address Layer data. It is documented as being a cross reference to the Tiger data and several other states had requested the cross reference. We have learned from other states that the reference is not good. We've processed all states by pulling the same fields from the StreetPro data. I was hoping that the info would be valid for some areas. You can disregard that column.

Gerry Flurer
Voice: (913) 345-6413

Please note new e-mail address: gerald.f.flurer@centurylink.com

---

From: Flurer, Gerry F [mailto:Gerald.F.Flurer@centurylink.com]
Sent: Wednesday, March 23, 2011 2:53 PM
To: ConnectingNJ@research.telcordia.com; Bonsick, David
Subject: RE: Additional CenturyLink NJBB Data Clarification

Does that mean that you'll drop our coverage in the census blocks larger than 2 miles?

If I understood a state mapper in one of our western states did with our road segment data was that they found the centroid of our segment and looked for a nearby centroid of their Tiger'09 segments. I think they used 1000 ft. Not sure if 1000 ft is workable in NJ. If you'd like to talk to them about how they did it, I'll look for contact info. Thanks.

Gerry Flurer
Voice: (913) 345-6413

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 23, 2011 3:09 PM
To: 'Flurer, Gerry F'; Bonsick, David
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: Additional CenturyLink NJBB Data Clarification

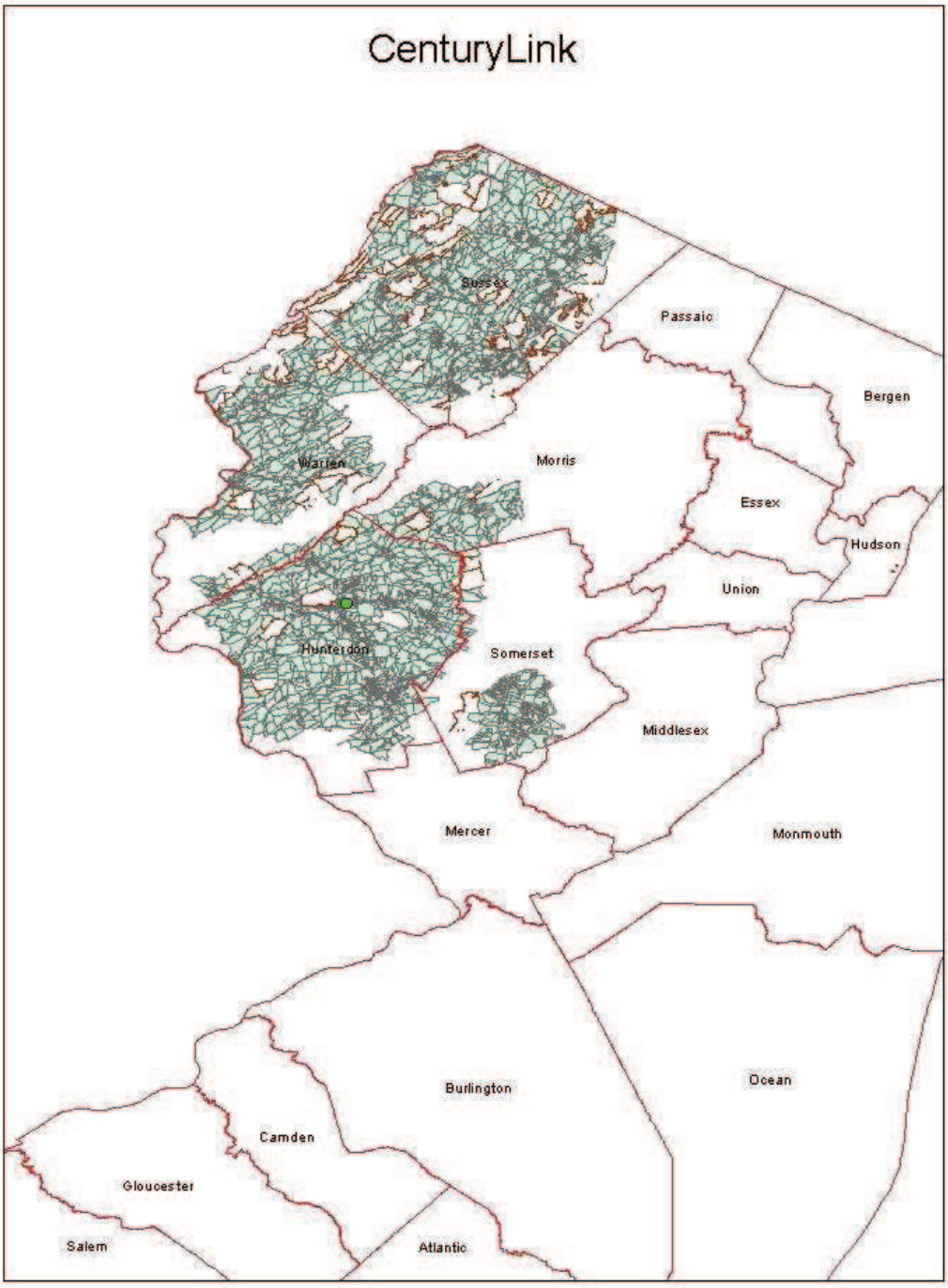
Gerry,
We opted to leave the data in place. We were able to map it, and it generally aligns with large census blocks. We removed the duplicate entries and will pass the rest as part of the submission.

Thanks for your help!

John

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Cogent Communications
Received: August 2010
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

44. NDA Status
45. Submission Overview
46. Submission File Details
47. Data Validations and Results
48. Data Transformation and Loading
49. Clarification Questions and Provider Responses
50. Notes and Open Issues

Section 1: NDA Status

No NDA was executed. All data were taken from the provider's public web site, FCC filings and/or information supplied by the provider via email

Section 2: Submission Overview

<table>
<tr><th colspan="4">MAPPING DATA - RECEIVED MARCH 1, 2011</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Cogent Communications, Inc.
Not provided
0019898303</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="2">Txt, xls, pdf, etc.</td><td>Email and pointers to Web site and SEC filings</td></tr>
<tr><td>File size</td><td colspan="2">Number of records, data elements</td><td>List of 20 addresses where they offer service</td></tr>
<tr><td>Speeds</td><td colspan="2"><table><tr><th>Type</th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)</th></tr><tr><td>Adver down</td><td>Address</td></tr><tr><td>Adver up</td><td>Address</td></tr><tr><td>Typical down</td><td>Not provided</td></tr><tr><td>Typica up</td><td>Not provided</td></tr><tr><td>Subscriber-weighted</td><td>Not provided</td></tr></table></td><td>Provided building addresses. Adver down and up are 10/11, very fast.</td></tr>
</table>

Technology Type	DOCSIS, xDSL, fiber, etc.	Fiber
End-user specification	Business, consumer, gov't etc	
Comments: They offer service directly to businesses at the addresses they provided. They are a reseller of broadband access to businesses at other locations. They had previously refused to provide data on Typical and Subscriber Weighted speeds. Inquired whether there was any change in their position on this via email.		
INTERCONNECTION DATA		
ID	Provider name "Doing business as" name FRN	
File size	Number of records, data elements	
Ownership	Leased/owned	
Transport Type	Fiber, wireless, copper	
Data Rates/Capacity		
Location	Street address, lat/lon, elevation	
Comments: We had previously extracted data for Middle Mile sites, based on the assumption that Cogent's Data Centers were interconnection points. We were instructed by the provider that these sites did not meet the definition of Middle Mile sites and thus should be removed.		
DATA COMPLETENESS		
Data Validation/ Verification		

Section 3: Submission File Details

Received one file by email on 13 Aug 2010: NJ State locations 100813 B.docx. Updated the address information via a query of "Service Locations" from provider's Web site (http://www.cogentco.com/?lang=en&option=com_content&view=article&id=40&action=search). Searched using: North America, United States, New Jersey.

Section 4: Validations and Results

Noted that 3 addresses have no street address, and one address did not have a valid zip code. Used Internet search to determine zip code for that location and verified with Cogent.

Confirmed provider reported data rates with their published information and SEC filings.

The only other validation to be done is whether each address can be successfully geocoded. See next section. One address is not

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

We copied the information to a spreadsheet. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Cogent Communications, Inc."
DBANAME	Same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	Set to "0019898303"
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	Set to "50"
MAXADDOWN	Populated from column "Maximum Advertised Speed Down"
MAXADUP	Populated from column "Maximum Advertised Speed Up
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

17. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each..
18. Created an excel sheet and imported it to a geodatabase table.
19. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
20. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
21. Discarded 8 rows with duplicate census blocks.

The mechanized procedure for the geocoding step is described in file GeoExcel_proc.txt.

Section 6: Clarification Questions and Responses

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 01, 2011 4:45 PM
To: 'Zulager, Ried'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011
Sensitivity: Private

Ried,
The attached spreadsheet integrates the data you submitted to us last year with and the data we could obtain from your Web site and SEC filings. We will use this data as the basis for the submission to the NTIA. If you have any comments or corrections on the data, please let me know.
We did notice that the "Service Location" form on your Web site did not return a valid zip code for the 5851 Westside Ave in North Bergen. We assigned an zip code of 07047 based on a Google search.
Of the data requested by NTIA, we were not able to obtain data on Typical speeds and the Subscriber Weighted Nominal Speed. You indicated last time that you were not prepared to offer this information. If your position on this matter has changed, we would be happy to receive the data.

Thanks for your cooperation

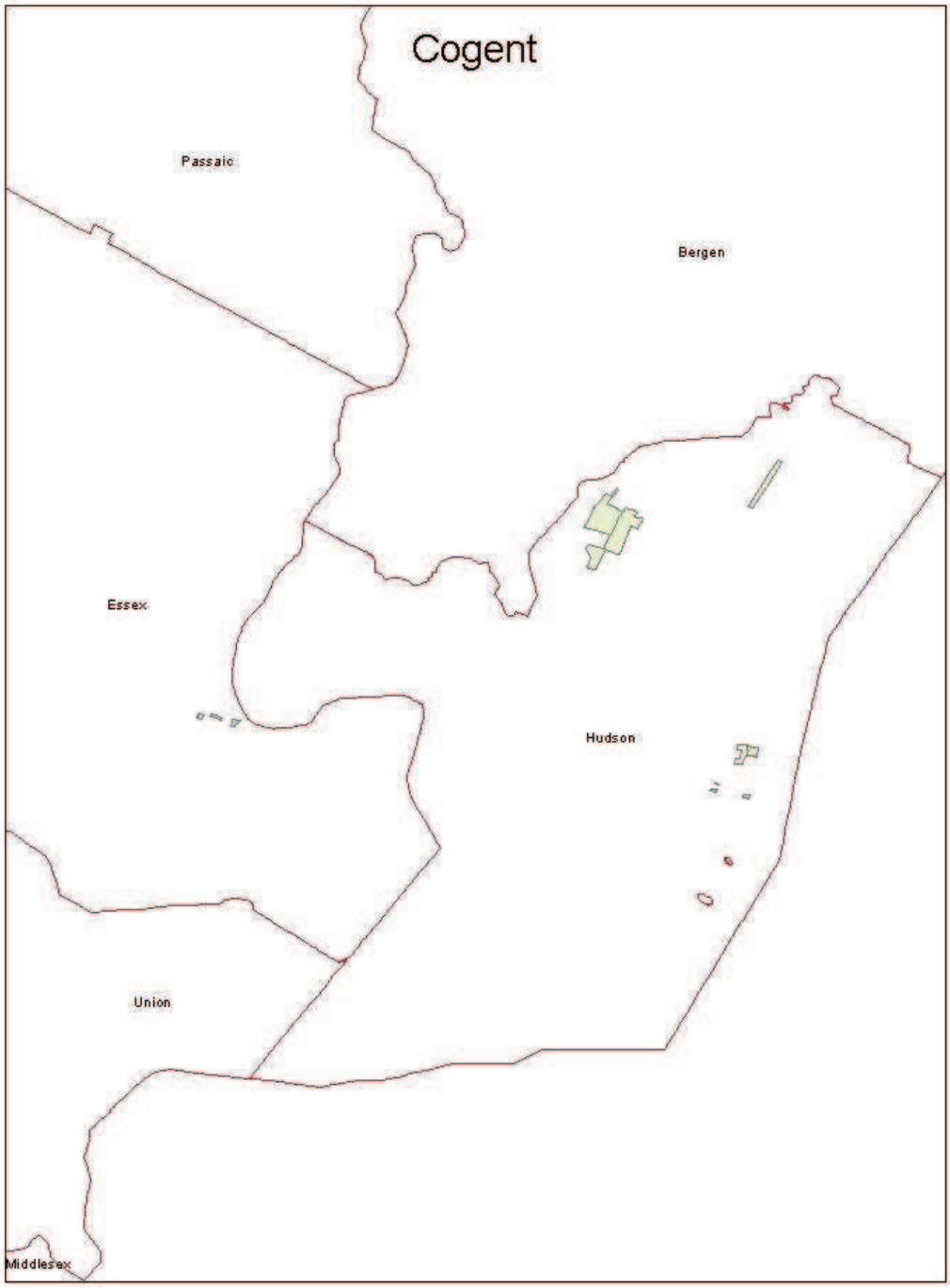
John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Zulager, Ried [mailto:RZulager@Cogentco.com]
Sent: Tuesday, March 01, 2011 6:03 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011
Sensitivity: Private

"We did notice that the "Service Location" form on your Web site did not return a valid zip code for the 5851 Westside Ave in North Bergen. We assigned an zip code of 07047 based on a Google search." Seems reasonable; since zip codes are fairly irrelevant to Cogent's business the zip code is not something that hits out A list of priorities in any database – nor is geocode.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data


Cogent
Passaic
Bergen
Essex
Hudson
Union
Middlesex

Broadband Provider Data Report

Provider: Comcast
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

51. NDA Status
52. Submission Overview
53. Submission File Details
54. Data Validations and Results
55. Data Transformation and Loading
56. Clarification Questions and Provider Responses
57. Notes and Open Issues

Section 1: NDA Status

Section 2: Submission Overview

<table>
<tr><td colspan="3">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td>Provider name
“Doing business as” name
FRN</td><td>COMCAST CABLE COMMUNICATIONS LLC
COMCAST
0004-4416-63</td></tr>
<tr><td colspan="3">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="2">Excel files w. Census Block Year 2009 data. Street segment level and CB level availability tables for CB’s less than and greater than 2 sq. mi.</td></tr>
<tr><td>File size</td><td colspan="2">see files</td></tr>
<tr><td>Speeds</td><td colspan="2">
<table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>yes (CBSA/RSA level)</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>yes (CBSA/RSA level)</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>no</td></tr>
</table>
</td></tr>
</table>

	Subscriber-weighted-down		no.	
Technology Type	40 (Cable Modem DOCSIS3.0)			
End-user specification	Comcast provides availability at the Census Block and Street Segment level.			
Comments: In a difference from October, the max DL speeds reported in the 7 RSA's have mostly increased up to the '10' level. In last submission, a xls file "34-cbsa_rsa-NJ.xlsx" providing avg down speeds was provided. Not this time.				
INTERCONNECTION DATA: PROVIDED AFTER REQUEST				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received four (4) files by SECURE UPLOAD.

Size	Name
121KB	34-streets-NJ.xlsx
2968KB	34-blocks-NJ.xlsx
9KB	New Jersey Maximum Advertised Speeds 12 31 10.xlsx
12KB	Broadband Mapping Data Information.doc

Section 4: Validations and Results

File 34-streets-NJ.xlsx contains 1,309 records. No shape is provided, and no reference ID such as Tiger Line ID is provided either. We cannot validate these segments against reference data, nor can we generate shapes for these segments.

File 34-blocks-NJ.xlsx contains 68,604 records. No shape is provided, but a Census Block ID is provided. Every ID is 15 digits long, suggesting this is Year 2000 Census Bureau geometry. We checked for duplicates and none were found. All blocks passed validation against Year 2000 reference data.

File "..Max Ad.." contains 7 records specifying the max advertised speed by CBSA/RSA. The max down speeds are 9 or 10; the max up speeds are all 7.

File "Broadband .." is a cover letter that provides no data suitable for loading.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_CensusBlock

Loaded from supplied text file “NJ - Wireline Service By Census Block.txt”. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “Provider_Name”
DBANAME	As supplied in column “DBA_NAme”
PROVIDER_TYPE	Set to 1
FRN	As supplied in column “FRN”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census_Block_FIPS_Code (first 3 digits)
TRACT	Populated from Census_Block_FIPS_Code (next 6 digits)
BLOCKID	Populated from Census_Block_FIPS_Code (next 4 digits; dropped 5th character if present)
BLOCKSUBGROUP	Set to null
FULLFIPSID	As supplied in column Census_Block_FIPS_Code
TRANSTECH	As supplied in column Technology_of_Transmission
MAXADDOWN	Set to “10” (see below)
MAXADUP	Set to “7” (see below)
TYPICDOWN	Set to null, not supplied
TYPICUP	Set to null, not supplied
SHAPE	Copied from Census Bureau TigerLine 2000, As matched by Census block 2000 ID

Internal processing notes:

20. Census Blocks: Comcast supplied Census 2000 block IDs (all are 15 characters). We referenced the Census Bureau TigerLine database for Year 2000 to extract and submit geographic features (i.e., shapes) for each census block based on the Census_Block_FIPS_Code.
21. Speeds: Data for maximum advertised down and up speeds were taken from file “New Jersey Maximum Advertised Speeds.xlsx”, where the same values are supplied for every MSA that Comcast serves.

NTIA Table BB_Service_RoadSegment

Loaded as discussed below. The following table explains the transformations that were

applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Comcast Cable Communications, LLC”
DBANAME	Set to “Comcast”
PROVIDER_TYPE	Set to 1
FRN	Set to “0004441663”
ADDMIN	Set to the least of the non-empty address numbers for the line segment
ADDMAX	Set to the greatest of the non-empty address numbers for the line segment
PREDIR	Set to null (no value supplied)
STREETNAME	As supplied (has all street components, not just name)
STREETTYPE	Set to null (no value supplied)
SUFFDIR	Set to null (no value supplied)
CITY	Set to null (no value supplied)
STATECODE	Set to “NJ”
ZIP5	Set to value of zipl column for the line segment
ZIP4	(no value supplied)
TRANSTECH	As supplied
MAXADDOWN	Set to 10
MAXADUP	Set to 7
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, As matched by County + Tiger Line ID

As mentioned above, the Comcast submission of street segments could not be matched with the Census Bureau TigerLine database. Instead we gathered a list of segments in large census blocks via two methods. We loaded a total of 6,868 segments.

First, for municipalities served in their entirety by Comcast, the following approach was used.

1. Adjusted the Municipality names provided by Comcast with the following rules to enable matching with official New Jersey Municipality reference data
    a. Changed to upper case
    b. Performed the following string replacements on the Municipality field
        i. TOWNSHIP -> TWP
        ii. BOROUGH -> BORO (only when preceded by a space)
        iii. MT. -> MOUNT
        iv. PT. -> POINT
        v. ORANGE CITY -> CITY OF ORANGE TWP (ORANGE at start of line)
    c. Removed any additional information in parentheses (I.e., appended county name)
2. Performed join between two data sources, using Municipality and County as keys

3. Dropped four military bases that did not match any municipality
4. Generated a file with Municipality, Type, County and Municipal Code
5. Joined this information with the large census blocks for each municipality, and then joined that result with the street segments for each large census block.
6. Loaded the resulting set of street segments and shapes after removing duplicates.

Second, we had to use a different approach for certain municipalities. Comcast indicated that for the following three municipalities, the approach of listing all street segments in a municipality would not be valid:

- Mount Olive Twp., Morris County
- Toms River (Dover Twp.), Ocean County
- Berkeley Twp., Ocean County

For these counties, we matched the segments provided by Comcast to the TigerLine segments. Of the 23 segments in these municipalities, we were able to locate 20 street segments.

Section 6: Clarification Questions and Responses

1. no typical values supplied (up or down) in any format (CB, etc.). This was an issue last submission as well when avg. downstream was provided for RSA/CBSA level only.
2. no subscriber weighted values supplied.
3. street segment data does not provide geographic features (e.g., shape) nor keys to a reference DB.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 5:33 PM
To: 'Michael_Ruger@comcast.com'
Cc: 'ConnectingNJ@research.telcordia.com'
Subject: Comcast NJ BB Data Clarifications

Michael,
We have been reviewing the data your submitted to the NJ Broadband Mapping Program and have a few clarification questions.

1. During the last round, we had difficulties in mapping the street-level data you provided for the large census blocks. The data is generally the same, so we anticipate similar issues. The approach we took during the last submission was to assume Comcast offered full coverage for a set of municipalities (the list you provided is attached.) You also named three municipalities where that approach would not be advisable (Mount Olive Twp, Toms River, Berkeley Twp.). Can we use that same approach during this submission? Can you provide an updated list of municipalities or confirm that the attached list still applies?
2. During the last submission round, you provided a file with average download speeds. That information was not included this round. Can you provide information that represents the typical speeds experienced by the customers of your highest speed service?

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Ruger, Michael [mailto:Michael_Ruger@comcast.com]
Sent: Tuesday, March 22, 2011 10:03 AM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Comcast NJ BB Data Clarifications

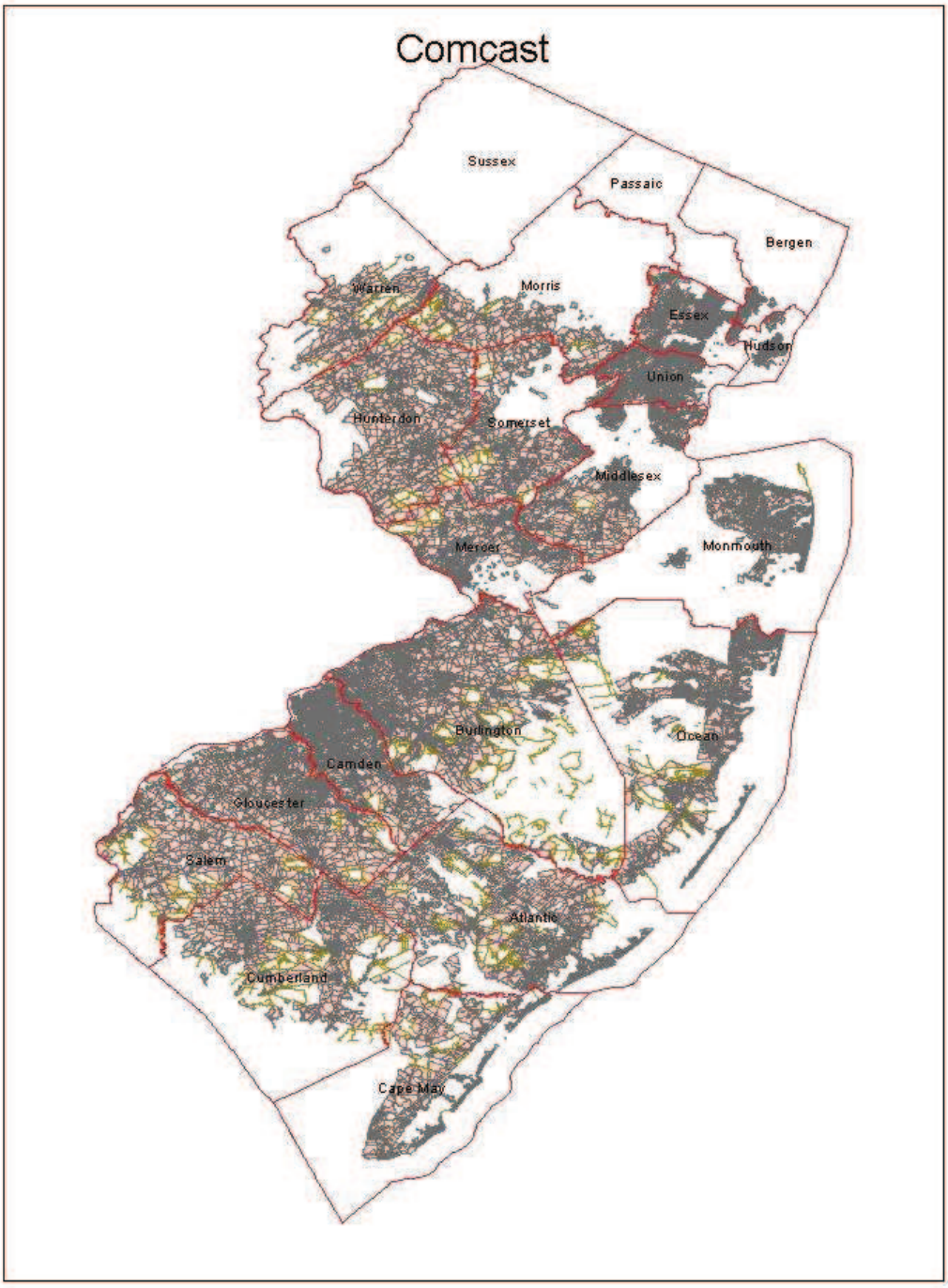
John—

I verified that the list still applies, with the same assumptions as last year.

Thanks—
Michael

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Dieca DBA Covad
Received: Feb, 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

58. NDA Status
59. Submission Overview
60. Submission File Details
61. Data Validations and Results
62. Data Transformation and Loading
63. Clarification Questions and Provider Responses
64. Notes and Open Issues

Section 1: NDA Status

No information provided.

Section 2: Submission Overview

<table>
<tr><td colspan="5">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td colspan="2">DIECA Communications, Inc.
Covad Communications Company
0003753753</td></tr>
<tr><td colspan="5">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="4"></td></tr>
<tr><td>File size</td><td colspan="4"></td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Address & block</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Address & block</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Address & block</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Address & block</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>county level</td></tr>
</table></td><td>Speeds are provided at address (line segment) and census block granularity.</td></tr>
</table>

	Subscriber-weighted-down		county level	
Technology Type	10 (ADS), 20 (SDSL), 30 (other copper)			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID	File **MiddleMileConnection*.txt			
File size	1kb			
Ownership	1			
Transport Type				
Data Rates/Capacity	4, 5			
Location	5 locations			
Comments:Five (5) data rows provided				

Section 3: Submission File Details

Received a zip file by SECURE UPLOAD (name disambiguated from previous submissions).

Size (kb)	Name
610	DIECACommunicationsInc._NJ_CONFIDENTIAL3.zip

The archive contains the following five (5) files:

Size	Name
109	NJBB_0003753753_AddressSegmentAvailability_DIECACommunicationsInc._CONFIDENTIAL.txt
17924	NJBB_0003753753_CensusBlockAvailability_DIECACommunicationsInc._CONFIDENTIAL.txt
3	NJBB_0003753753_CMAAdvertisedAvailability_DIECACommunicationsInc._CONFIDENTIAL.txt
1	NJBB_0003753753_MiddleMileConnection_DIECACommunicationsInc._CONFIDENTIAL.txt
3	NJBB_0003753753_SubscriberWeightedNominalSpeed_DIECACommunicationsInc._CONFIDENTIAL.txt

Section 4: Validations and Results

File "..AddressSegmentAvailability.." (945 rows)
Technologies: 30,20,10 (xDSL and other copper)

Fields:

Provider Name
DBA Name
FRN
Census Block ID
Street NameStreet Segment ID (TLID)
Technology of Transmission
Maximum Advertised Downstream Speed
Maximum Advertised Upstream Speed
Typical Downstream Speed
Typical Upstream Speed

All TLID were validated against year 2000 Census Bureau reference data successfully, and all are in large census blocks.

File "..CensusBlockAvailability.." (193,193 rows)
Fields:
Provider Name
DBA Name
FRN
Census Block ID
Technology of Transmission
Maximum Advertised Downstream Speed
Maximum Advertised Upstream Speed
Typical Downstream Speed
Typical Upstream Speed

The input contains Year 2000 census block data, judging from the consistent length of 15 digit block IDs. Due to use of multiple technologies there are more rows here than the number of NJ census blocks (141,342). No duplicates were received, all submitted IDs are valid according to Year 2000 reference data, and all are less than 2 square miles.

File "..CMAAdvertisedAvailability.."
Provides three technology codes (10, 20, 30), MSA codes, and max advertised up and down speed codes. The max speed for a given technology is different for different MSAs. We are unlikely to use this data since max speed codes are provided on a row-by-row basis.

File "..MiddleMileConnection.."

5 rows, which is a significant change from the last submission, when only 2 rows were provided. Viewing the data in ArcMap indicates that all points are in New Jersey.

File "..SubscriberWeightedNominalSpeed.."

All CMA IDs are valid, technology of transmission codes are valid, and speed codes are plausible. We do not submit overview data in this round so will not use this input file.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from supplied file "..MiddleMileConnection..". The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column Provider Name
DBANAME	As supplied in column DBA Name
FRN	As supplied in column FRN
OWNERSHIP	As supplied in column Ownership
BHCAPACITY	As supplied in column Serving Facility Capacity
BHTYPE	As supplied in column Service Facility Type
LATITUDE	As supplied in column Latitude
LONGITUDE	As supplied in column Longitude
ELEVFEET	As supplied in column Elevation
STATEABBR	Set to "NJ"
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

22. Created an excel sheet and imported to a geodatabase table.
23. Added point corresponding to the Latitude, Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option. Specify WGS84 for the coordinate system of the points (this is a guess).
24. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file "..CensusBlockAvailability..". The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation

PROVNAME	As supplied in column Provider_Name
DBANAME	As supplied in column DBA_Name
PROVIDER_TYPE	Set to 1
FRN	As supplied in column FRN
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census_Block_ID (first 3 digits)
TRACT	Populated from Census_Block_ID (next 6 digits)
BLOCKID	Populated from Census_Block_ID
BLOCKSUBGROUP	Set to null
FULLFIPSID	As supplied in column Census_Block_ID
TRANSTECH	As supplied in column Technology_of_Transmission
MAXADDOWN	As supplied in column Maximum_Advertised_Downstream_Speed
MAXADUP	As supplied in column Maximum_Advertised_Upstream_Speed
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	As found in Census Bureau TigerLine year 2000 reference data

Internal processing notes:

3. We used Census Bureau reference data for Year 2000 to locate and submit geographic features (i.e., shapes) for each census block.

NTIA Table BB_Service_RoadSegment

Loaded from supplied File “..AddressSegmentAvailability..". The following table explains the transformations that were applied to load the target table.

Table Column	**Data Source / Transformation**
PROVNAME	As supplied in column Provider_Name
DBANAME	As supplied in column DBA_Name
PROVIDER_TYPE	Set to 1
FRN	As supplied in column FRN
ADDMIN	Set to the least of the non-empty address numbers from TigerLine
ADDMAX	Set to the greatest of the non-empty address numbers from TigerLine
PREDIR	Set to null (no value supplied)
STREETNAME	As supplied (has all street components, not just name)
STREETTYPE	Set to null (no value supplied)
SUFFDIR	Set to null (no value supplied)
CITY	Set to null (no value supplied)
STATECODE	Set to “NJ”
ZIP5	Set to zipl from TigerLine
ZIP4	Set to null (no value supplied)
TRANSTECH	As supplied

MAXADDOWN	As supplied in column Maximum_Advertised_Downstream_Speed
MAXADUP	As supplied in column Maximum_Advertised_Upstream_Speed
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Road segment shape copied from Year 2000 Census Bureau TigerLine reference data, as matched by TLID

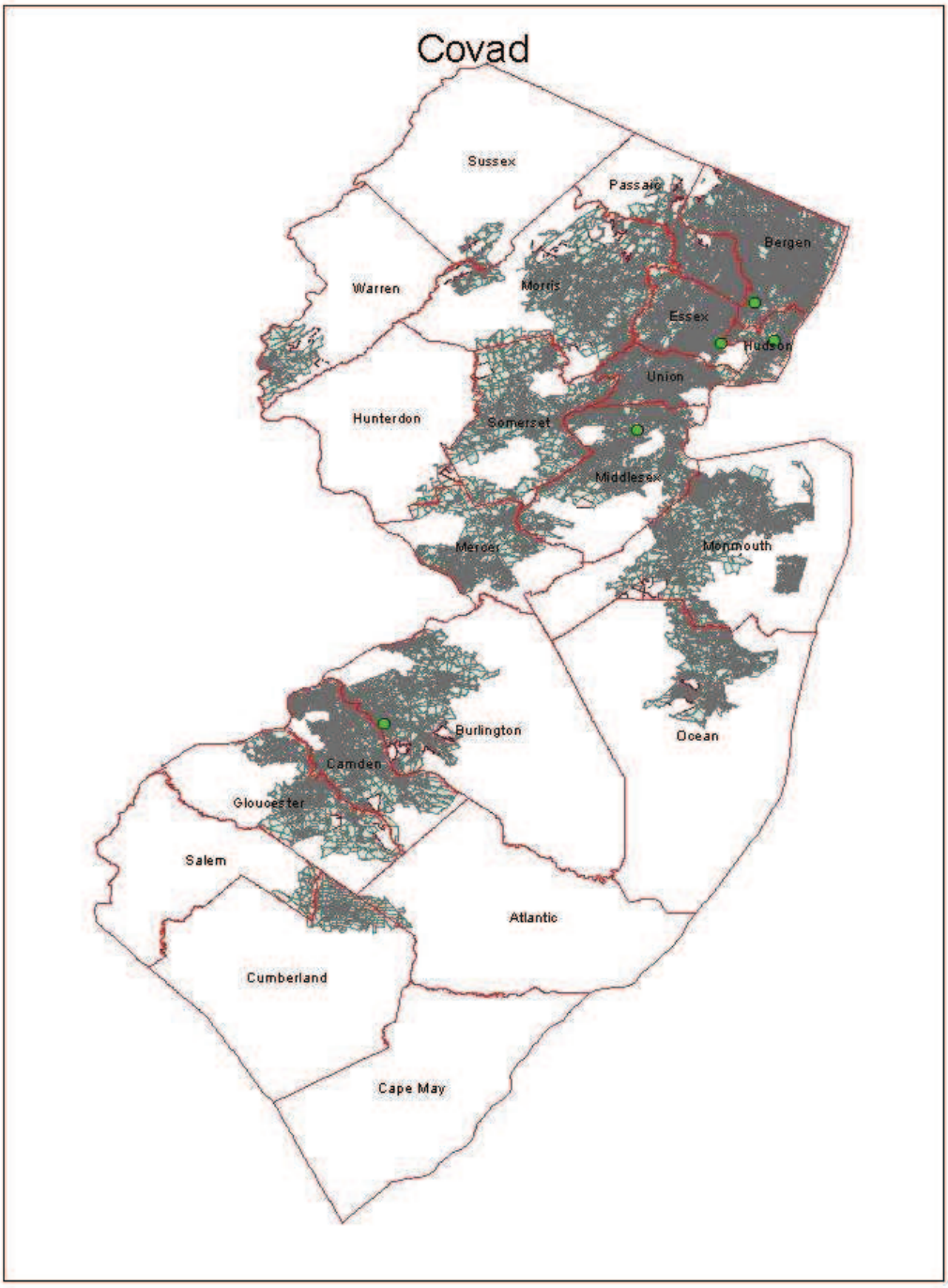
Internal processing notes:

1. Discarded 6 duplicate rows from the input based on compound key of county, TLID, and tech_transmission fields. These occur because the segment touches different census blocks, but we cannot submit duplicate shapes.
2. After join against Census Bureau reference data, 25 rows were discarded based on compound key of county, TLID, and tech_transmission fields. This is again due to segments touching multiple census blocks.
3. Total rows loaded is 938

Section 6: Clarification Questions and Responses

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: GOES Telecom
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

65. NDA Status
66. Submission Overview
67. Submission File Details
68. Data Validations and Results
69. Data Transformation and Loading
70. Clarification Questions and Provider Responses
71. Notes and Open Issues

Section 1: NDA Status

None

Section 2: Submission Overview

<table>
<tr><td colspan="4">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN
Holding company name
Holding company number</td><td>GOES Telecom
Not provided
0011437746
GOES
130548</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3">1 Excel</td></tr>
<tr><td>File size</td><td colspan="3">worksheet 18432 bytes, approx 38 rows</td></tr>
<tr><td>Speeds</td><td colspan="2"><table><tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr><tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr><tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr><tr><td>Advertised-upstream</td><td></td><td>Not provided</td></tr><tr><td>Advertised-</td><td></td><td>Not provided</td></tr></table></td><td>Submitted 34 addresses with upload and download speeds (generally in kbps) for each address. These are delivered speeds to customers. We located advertised speeds on their Web site, and provider confirmed that those speeds were available at each location they served. We will use the data from Web site as</td></tr>
</table>

	downstream			advertised speeds. Note that for three addresses, submitted speeds as “10mpbh”. Need to ask them what that means. We asked these questions last time, but did not receive a response in time to submit. This time we received corrected data. Note also that some speeds are listed as having faster upload speeds than download speeds. Need to verify. We asked these questions last time, but did not receive a response in time to submit. This time we received corrected data. No typical or subscriber weighted speeds were provided.
	Subscriber-weighted-up		Not provided	
	Subscriber-weighted-down		Not provided	
Technology Type	10 (ADSL) and 70 (Terrestrial fixed wireless)			
End-user specification	None			
Comments: Provided a list of 34 customers and the speeds they are subscribed to. Most are 128K up, 512K down.				
INTERCONNECTION DATA				
ID	None provided			
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received 1 file by email, subsequently updated:

Size	Name
17920	20110302 Telcordia.xls
17920	20110302 Telcordia_update.xls

The file contains a list of addresses and max speeds; e.g., the “up-to” limit of their rate plan. The addresses in this file appear to be for individual customers (as opposed to addresses of multi-tenant buildings in a central business district).

Section 4: Validations and Results

The addresses can be geocoded.

For many ADSL subscribers, a download/upload rating of 512K/128K looks reasonable, but this is not a "broadband" service according to the NOFA definition. We will discard records for slow services.

Some ADSL subscribers have upload speeds that exceed download. The last two entries have unknown speed ratings: 10mpbh up and 10mpbh down. The updated submission corrected these problems.

What spectrum is used by the fixed wireless service?

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we will discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file “20110302 Telcordia_update.xls” (37 data rows, only 9 broadband-speed rows). The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Global Online Electronic Services, Inc.”
DBANAME	Not supplied; set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	Set to “0011437746”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology Code
MAXADDOWN	Set to code 4 per email response to questions
MAXADUP	Set to code 3 per email response to questions
TYPICDOWN	Set to null, not provided

TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

22. Geocoded the addresses using the Google geocoder to obtain latitude, longitude value pairs.
23. Created point shapes using ESRI from lat, long value pairs.
24. Spatially joined the points with Census Bureau TigerLine Year 2000 reference data to find the containing census block. This yielded census block attributes including the ID (aka FIPS code).
25. Dropped duplicate census blocks (caused by two customers in the same census block).
26. Loaded the resulting data into an SDE feature class. Of 37 original records, 33 were successfully geocoded, 9 have broadband speeds (rest are 128Kbps), and 1 is a duplicate, leaving just 8.

The mechanized procedure for the three steps is described in file GeoExcel_proc.txt.

NTIA Table BB_Service_Wireless

Loaded using shapes from reference data for the 2 unique records. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to “Global Online Electronic Services, Inc.”
DBANAME	Not supplied; set same as PROVNAME
FRN	Set to "0011437746"
TRANSTECH	Set to 70 as supplied in XLS sheet
SPECTRUM	Set to 6
MAXADDOWN	Set to 7
MAXADUP	Set to 7
TYPICDOWN	Set to null
TYPICUP	Set to null
STATEABBR	Set to “NJ”
SHAPE	Year 2000 Census Block shape obtained from reference data.

Internal processing notes:

5. See above for discussion of geocoding addresses and finding the containing census block.
6. Spectrum: Set to 6, Unlicensed
7. Speeds: The fixed-wireless link is reported with 10Mbps in each direction (symmetric). That corresponds to NOFA speed code 7.

Section 6: Clarification Questions and Responses

Sent the following email based on our analysis:

From: Wullert, John R II
Sent: Wednesday, March 02, 2011 10:57 AM
To: 'George Beckenthal'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: FW: NJ BB Data Collection - Spring 2011

George
We have been reviewing the data you submitted to the New Jersey Broadband mapping program. Based on our initial review, we have some questions for you that will help us better understand the data and process it accurately.

1. Are some ADSL services configured to deliver faster UPSTREAM than downstream bit rate, or are the numbers accidentally reversed? For example, some entries show 1024K up and 384K down and others show 1536K up and 512K or 768K down, which looks unusual.
2. What does "10 mpbh" mean for the last three entries in your table? Should those really be 10 mbps?
3. The data you reported seems to be specific to customers. Do you advertise or offer higher speeds to those customers over the existing facilities? (Specifically, could these customers upgrade easily to a higher speed if needed?). If so, what upload and download speeds are possible for these customers? (If you have this information, we can use it as "maximum advertised" speeds and use the data you provided as "typical speeds")

We would appreciate your prompt attention to these questions. If you need further clarification, please feel free to contact me.

Thank you for your participation!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: George Beckenthal [mailto:gbeckenthal@goes.com]
Sent: Wednesday, March 02, 2011 4:01 PM
To: Wullert, John R II
Subject: Re: FW: NJ BB Data Collection - Spring 2011

John,
The attached file has been has the corrected upload and download speeds..
In answer to you 3rd questions, the customers pay for different speed plans.
George

From: Wullert, John R II
Sent: Wednesday, March 02, 2011 4:32 PM
To: 'George Beckenthal'
Subject: RE: FW: NJ BB Data Collection - Spring 2011

George,

I see the following speed plans on your Web site. Are these available at any of the locations you serve?

- Direct* $39.95/month 512K Downstream/128K Upstream plus 5 Email Boxes
- Express* $49.95/month 768K Downstream/512K Upstream plus 5 Email Boxes
- Power* $59.95/month 1024K Downstream/384K Upstream plus 5 Email Boxes
- Select* $79.95/month 1536K Downstream/512K Upstream plus 5 Email Boxes
- Performance* $99.95/month 1536K Downstream/768K Upstream plus 5 Email Boxes

John

From: gbeckenthal@goes.com [mailto:gbeckenthal@goes.com]
Sent: Friday, March 04, 2011 2:42 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: FW: NJ BB Data Collection - Spring 2011

Hi John,
I meant to answer yes to you.
Thanks,
George

> George,
>
> I received this note from you yesterday, but it did not contain any new
> message from you.
>
>
>
> John

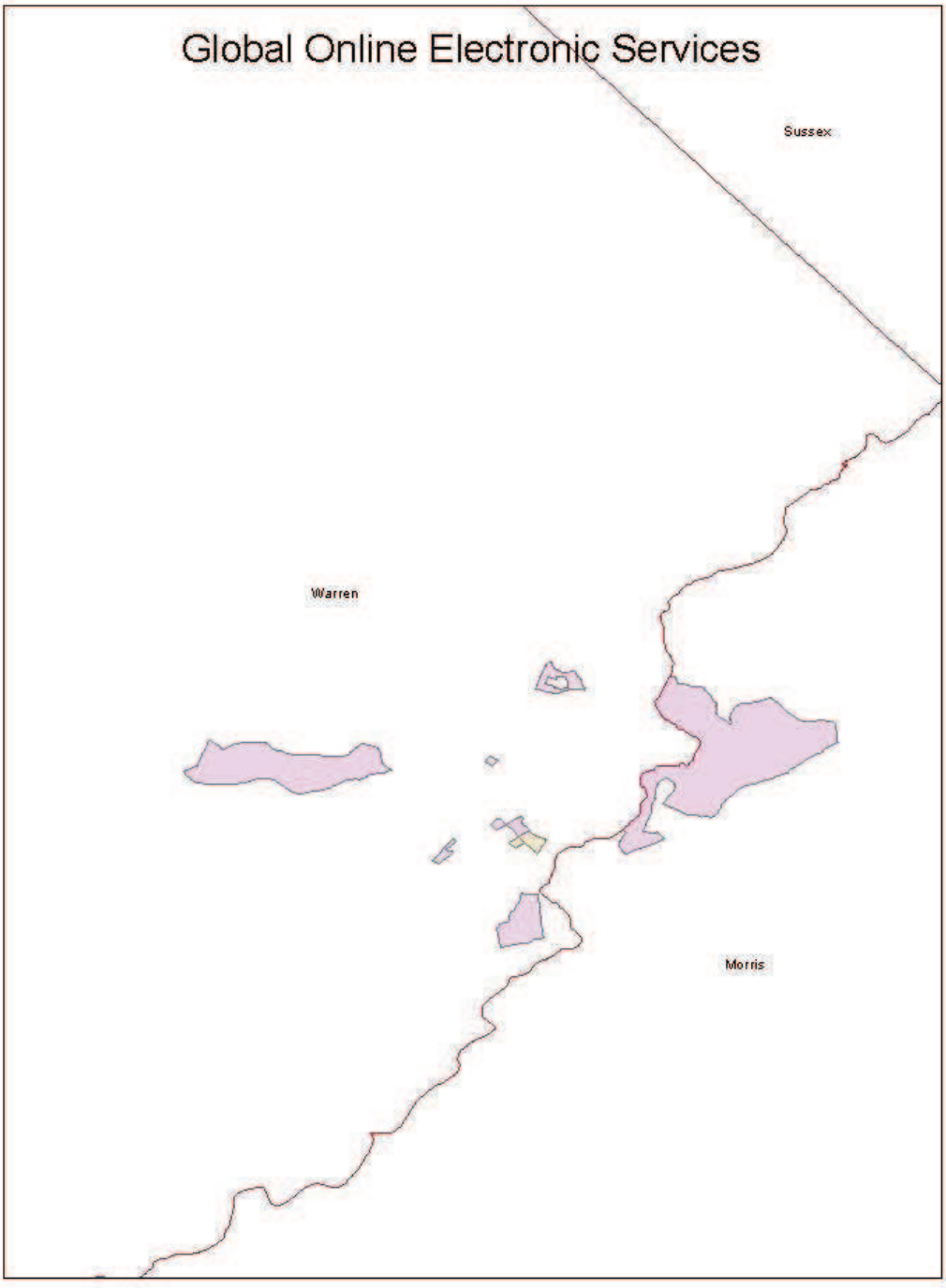
From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 04, 2011 2:52 PM
To: 'gbeckenthal@goes.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: FW: NJ BB Data Collection - Spring 2011

George,
Great. Then we will use the values below as your advertised speeds. Given that these are DSL and dedicated lines, we can also use the values below as your typical speeds. We will map these based on the addresses you provided. We may even be able to use the data your provided to get Subscriber Weighted Average speed.

John

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Hometown Online
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

72. NDA Status
73. Submission Overview
74. Submission File Details
75. Data Validations and Results
76. Data Transformation and Loading
77. Clarification Questions and Provider Responses
78. Notes and Open Issues

Section 1: NDA Status

No NDA in place.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Hometown Online Inc.
Warwick Online
0006-6512-44</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Text</td></tr>
<tr><td>File size</td><td colspan="3">1,761,280 bytes; 6,778 rows</td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Not provided</td></tr>
</table></td><td>Provided list of customer locations with column “DSL speed avail”. This is probably downstream speed, but need to verify with provider.

Communications with provider and validation via their Web site resulted in clarification: Max advertised speeds are:
Downstream: 15 Mbps
Upstream: 800 Mbps.
‘
Rows where the speed and</td></tr>
</table>

	Subscriber-weighted-down		Not provided	DSL Qual columns are blank indicate no-service. These should be dropped. Provider has column that indicates geo-spatial capabilities, but only one address in list appears to be geo-located on their map
Technology Type	DSL – not clear in each case whether it is Asymmetric or Symmetric			
End-user specification	Not provided			
Comments: Address data with some indications of qualification for different data services.				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:No connection-point data provided				

Section 3: Submission File Details

Received one (1) file by EMAIL:

Size	**Name**
1,761,280	M4 STRUCTURES - NJ 3-10-11.xls

The file contains 6778 rows of data. Each row has a street address. Of the 6778 rows, 121 have no speed data. The rest have an indication of maximum possible DSL speed. Some indicate 5Mbps, some indicate 15Mpbs and some indicate 25Mbps. Also has information about TV qualification which we do not require.

Section 4: Validations and Results

All addresses were successfully geocoded using Arroyo flow Hometown_geocode_yahoo.arroyo invoking the Yahoo geocoder.

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we discover the census block for each customer address, and then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from the supplied file after geocoding. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Hometown Online Inc."
DBANAME	Set to "Warwick Online"
PROVIDER_TYPE	Set to 1
FRN	Set to "0006651244"
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from Census Block FIPS00 Code (first 3 digits)
TRACT	Populated from Census Block FIPS00 Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS00 Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS00 Code
TRANSTECH	Set to code "10" (ADSL)
MAXADDOWN	Set to code "7" (range includes 15Mbps, per email)
MAXADUP	Set to code "3" (range includes 1Mbps, per email)
TYPICDOWN	Set to null, not supplied
TYPICUP	Set to null, not supplied
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address point

Internal processing notes:

27. Geocoded the addresses using the Yahoo geocoder; all were geocoded successfully.
28. Created an excel sheet and imported to a geodatabase table.
29. PreLoaded the xls file (geocoded entries, joined with Census Blocks and exported into SDE).
30. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
31. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
32. Discarded 6,106 rows with duplicate census blocks, leaving 433 unique census blocks.
33. Kept only blocks in the cities of Hardyston, Highland, Vernon, and West Milford (several variations like Twp and Township). Discarded blocks that were

geoloated in cities Hewitt, Hillsdale, Wantage Twp, etc.

Section 6: Clarification Questions and Responses

1. You provide DSL Speed Available on most of the rows in the submitted data. In this data, 25 Mbps is the highest value. Can we use this as the maximum advertised downstream speed? Is this value potentially available at the other locations, even if the customer selected a lower speed tier?
2. Assuming the answer to question 1 is yes, what is the maximum upstream speed that corresponds to the downstream speed of 25Mbps? (Alternatively, what is the maximum advertised upstream speed?)
3. Of the data submitted, 121 records do not include any speed data. These records also have blanks in the DSL Qual column. Does that mean that you do NOT offer DSL services to these addresses? (If so, we will drop these records from the submission.)
4. Your data lists DSL as the technology used to deliver the broadband access. Is this ADSL or SDSL? Does that vary by location?
5. The NTIA has repeatedly asked us to request typical speed data at the census block level. Do you have this data available?

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 11:40 AM
To: 's.sommerer@wvtc.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: Hometown NJ Broadband Data Clarification

Scott,

We have reviewed the data you submitted to the NJ Broadband Mapping program and have a few clarification questions:

1. You provide DSL Speed Available on most of the rows in the submitted data. In this data, 25 Mbps is the highest value. Can we use this as the maximum advertised downstream speed? Is this value available at the other locations you provide, even if the customer has currently selected a lower speed service?
2. Assuming the answer to first part of item 1 is yes, what is the maximum upstream speed that corresponds to the downstream speed of 25Mbps? (Alternatively, what is the maximum advertised upstream speed?)
3. Of the data submitted, 121 records do not include any speed data. These records also have blanks in the DSL Qual column. Does that mean that you do NOT offer DSL services to these addresses? (If so, we will drop these records from the submission.)
4. Your data lists DSL as the technology used to deliver the broadband access. Is this ADSL or SDSL? Does that vary by location?
5. The NTIA has repeatedly asked us to request typical speed data at the census block level. Do you have this data available?

Thanks for you participation!

John Wullert

Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: s.sommerer@wvtc.com [mailto:s.sommerer@wvtc.com]
Sent: Tuesday, March 15, 2011 8:28 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

John

See responses.

Have a great day.

Scott

-----Original Message-----
From: "NJ Broadband Data Collection" <ConnectingNJ@research.telcordia.com>
Sent: Monday, March 14, 2011 11:40am
To: s.sommerer@wvtc.com
Cc: ConnectingNJ@research.telcordia.com
Subject: Hometown NJ Broadband Data Clarification

Scott,
We have reviewed the data you submitted to the NJ Broadband Mapping program and have a few clarification questions:

1. You provide DSL Speed Available on most of the rows in the submitted data. In this data, 25 Mbps is the highest value. Can we use this as the maximum advertised downstream speed? **Ans. No. 15 mbps is max advertised** Is this value available at the other locations you provide, even if the customer has currently selected a lower speed service? **Ans. Yes in some cases.**
2. Assuming the answer to first part of item 1 is yes, what is the maximum upstream speed that corresponds to the downstream speed of 25Mbps? **Ans. 25 Mbps** (Alternatively, what is the maximum advertised upstream speed?)
3. Of the data submitted, 121 records do not include any speed data. These records also have blanks in the DSL Qual column. Does that mean that you do NOT offer DSL services to these addresses? (If so, we will drop these records from the submission.)**Ans. Blank entries mean we do offer service there and we just have not built out to establish the speed. Therefore we cannot give you a speed level for these locations.**
4. Your data lists DSL as the technology used to deliver the broadband access. Is this ADSL or SDSL? Does that vary by location?**Ans. It is mostly ADSL. Some locations do have SDSL.**
5. The NTIA has repeatedly asked us to request typical speed data at the census block level. Do you have this data available?**No.**

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 16, 2011 7:34 AM
To: 's.sommerer@wvtc.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

Scott,

A few additional clarifications on your answers

1. In your answers to questions 1 and 2, it sounds like:
    a. Maximum advertised downstream is 15 Mbps (toward customer)
    b. Maximum advertised upstream is 25 Mbps (from customer)

    I am assuming these two should be reversed.
2. Regarding question 4 – is there any way for us to distinguish the locations where you offer ADSL from those where you offer SDSL?

Thanks for your help.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

John

See responses.

Have a great day..

Scott

-----Original Message-----
From: "NJ Broadband Data Collection" <ConnectingNJ@research.telcordia.com>
Sent: Monday, March 14, 2011 11:40am
To: s.sommerer@wvtc.com
Cc: ConnectingNJ@research.telcordia.com
Subject: Hometown NJ Broadband Data Clarification

Scott,

We have reviewed the data you submitted to the NJ Broadband Mapping program and have a few clarification questions:

1. You provide DSL Speed Available on most of the rows in the submitted data. In this data, 25 Mbps is the highest value. Can we use this as the maximum advertised downstream speed? **Ans. No. 15 mbps is max advertised** Is this value available at the other locations you provide, even if the customer has currently selected a lower speed service? **Ans. Yes in some cases.**
2. Assuming the answer to first part of item 1 is yes, what is the maximum upstream speed that corresponds to the downstream speed of 25Mbps? **Ans. 25 Mbps** (Alternatively, what is the maximum advertised upstream speed?)
3. Of the data submitted, 121 records do not include any speed data. These records also have blanks in the DSL Qual column. Does that mean that you do NOT offer DSL services to these addresses? (If so, we will drop these records from the submission.)**Ans. Blank entries mean we do offer service there and we just have not built out to establish the speed. Therefore we cannot give you a speed level for these locations.**
4. Your data lists DSL as the technology used to deliver the broadband access. Is this ADSL or SDSL? Does that vary by location?**Ans. It is mostly ADSL. Some locations do have SDSL.**
5. The NTIA has repeatedly asked us to request typical speed data at the census block level. Do you have this data available?**No.**

From: "NJ Broadband Data Collection" <ConnectingNJ@research.telcordia.com>
Sent: Wednesday, March 16, 2011 7:33am
To: s.sommerer@wvtc.com
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

Scott,

A few additional cladrifications on your answers

1. In your answers to questions 1 and 2, it sounds like:
    a. Maximum advertised downstream is 15 Mbps (toward customer)
    b. Maximum advertised upstream is 25 Mbps (from customer)

   I am assuming these two should be reversed.
2. Regarding question 4 – is there any way for us to distinguish the locations where you offer ADSL from those where you offer SDSL?

Thanks for your help.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: s.sommerer@wvtc.com [mailto:s.sommerer@wvtc.com]
Sent: Wednesday, March 16, 2011 11:54 AM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

John

Upon further review: I would like to change my response.

We do not advertise a downstream speed. We do not advertise an upstream speed.
We just advertise "its fast"

SDSL is offered in census track 3714.

Have a great day.

Scott

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 16, 2011 2:07 PM
To: 's.sommerer@wvtc.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

Scott,

On the wvtc.com Web site, I see multiple speed plans (2Mbps, 1Mbps and 512 kbps) as well as a reference “up to 15 Mbps in select areas”. These speeds are not specifically identified as upstream or

downstream, but seem likely to be referring to downstream rates. These are the type of advertised speeds we are trying to collect and accurately reflect in the broadband map. I don't have any way to report a speed of "fast", and I don't want to have to leave your data out of our submission. I propose that we use 15 Mbps as the maximum advertised downstream speed. I'd still like to have a corresponding upstream speed. Other DSL providers with 15 Mbps downstream provide a 1 Mbps upstream rate. Is that an accurate value for your service?

John

From: s.sommerer@wvtc.com [mailto:s.sommerer@wvtc.com]
Sent: Thursday, March 17, 2011 3:43 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Hometown NJ Broadband Data Clarification

John

You've got me. It is on our website and I must have just spoken to the wrong person.

Lets go with 15 Mbps as max advertised downstream and corresponding upstream is more like 800K rather than 1 Mbps.

Have a great day.

J. Scott Sommerer

NOTE: These answers to questions from previous submission define the fields in the data file:

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, September 08, 2010 5:10 PM
To: 's.sommerer@wvtc.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: Hometown NJBB Data Clarification

Scott,
We have performed our initial review of the data you submitted and we have several clarification questions and requests for additional information.

1. Is **Hometown Online** the official company name? ***Yes***
2. Do have any other "doing business as" names? ***Warwick Online***
3. Can you please tell us which FCC Registration Number (FRN) we should use for your company? ***0006-6512-44***
4. What are the maximum advertised downstream and upstream speeds in your service area? ***downstream is 15 MG and upstream is 1MG***
5. The column headings seem to indicate satellite (DirectTV) and DSL qualifications. Is data only provided by DSL? Is this ADSL, SDSL, or other copper wireline (technology of transmission)?
6. ***Data is only provided via ADSL , VDSL & ADSL2+.***
7. What does the data mean in these columns:

1. GEOPlaced - ***This references indicates whether or not the address has a symbol on our map.***
2. DSL Qual - ***This reference indicates whether or not the address is within our DSL serving area..***
3. WVT TV Qual - ***This indicates whether or not the address is within our VDSL serving area (Wireline video)***
4. Direct TV Qual - ***This indicates whether or not the address has a line of sight for our Direct TV offering.***
5. DSL Speed avail - ***This is the MAX speed available to this particular address.***

8. The NTIA has repeatedly asked us to request "Subscriber Weighted Nominal Speed" at the county level. Can you provide this data? ***No.***

We would appreciate your prompt response to these questions.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: s.sommerer@wvtc.com [mailto:s.sommerer@wvtc.com]
Sent: Friday, September 17, 2010 11:14 AM
To: ConnectingNJ@research.telcordia.com
Cc: Christopher Welch; Joseph Krasniewicz
Subject: FW: RE: Hometown NJBB Data Clarification

John

1) regarding maximum download speed: you asked "What are the maximum **advertised downstream.... speeds..."**

My marketing manager tells me the maximum **advertised** downstream speed is15Mbps. I will stick with that answer.

2) Regarding the rows in the table listing 25 Mbps. This is the **actual** speed. But it is not what we advertise.

3) Regarding the corresponding upload speed for 2) above.. answer is 25 Mbps

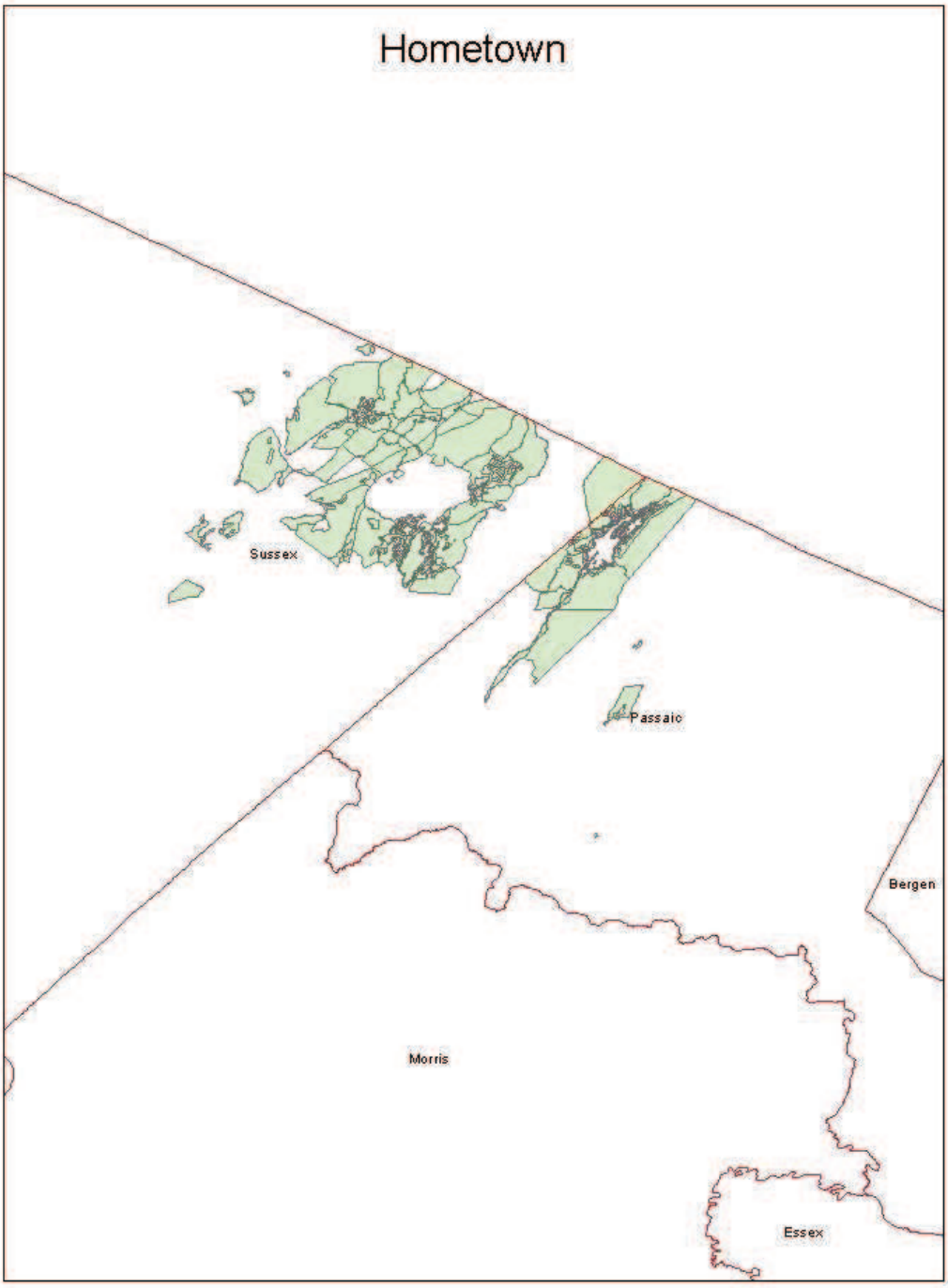
4) Rows with no DSL entry means the structure is not Geo coded on our map. This could mean that we do offer service there and we just have not built out to establish the speed. But we just **cannot give you the speed** level for these locations. So maybe you just obliterate them from the data.

John, I hope and think that these four answers will get us good to go.. And you have established earlier that you will not publicize the availability of our video services. So take it away my friend.

J. Scott Sommerer

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: HughesNet Communications Inc.
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

79. NDA Status
80. Submission Overview
81. Submission File Details
82. Data Validations and Results
83. Data Transformation and Loading
84. Clarification Questions and Provider Responses
85. Notes and Open Issues

Section 1: NDA Status

NONE

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Hughes Network Systems, LLC
HughesNet
0017434911</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3"></td></tr>
<tr><td>File size</td><td colspan="3"></td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Provided</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Provided</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Not provided</td></tr>
</table></td><td>Submitted Excel file containing a list of counties per state that are covered by their service. This included all 21 counties in New Jersey.

Email message contained an image that listed their three consumer service plans and the associated upstream and downstream data rate.
Max plan "Power 200" is 2Mbps down, 300Kbps up. The corresponding speed range codes are 4 down, 2 up.</td></tr>
</table>

	Subscriber-weighted-down		Not provided	Spectrum is 7, satellite.
Technology Type	Code 60 (Satellite)			
End-user specification	Voice message indicated that the referenced plans are consumer-focused.			
Comments:				
INTERCONNECTION DATA: NONE				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: Not provided				

Section 3: Submission File Details

Received an extraordinarily short email explaining their service offering, with a JPG image of the northeastern United States showing where they have subscribers.

Section 4: Validations and Results

No rows of data need to be validated.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_Wireless

Loaded county shapes from reference data for the State of New Jersey based on emailed statements that all counties are covered. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "Hughes Network Systems, LLC"
DBANAME	Set to "HughesNet"

FRN	Set to 0017434911
TRANSTECH	Set to 60
SPECTRUM	Set to 7 per translation shown below
MAXADDOWN	Set to 4, see below.
MAXADUP	Set to 2", see below.
TYPICDOWN	Not provided, set to null
TYPICUP	Not provided, set to null
STATEABBR	Set to "NJ"
SHAPE	County shape read from reference data.

Internal notes on processing:

8. Spectrum: No statement was provided. The NTIA data model has a single column for spectrum. Satellite corresponds to NTIA "SPECTRUM USED" code value 7.
9. Speeds: The maximum advertised speeds provided in the emailed brochure are as discussed above For max adv speeds we encoded the submitted down speed as value 4 (range 1.5-3 Mbps) and encoded the submitted up speed as value 2 (range 200 Kbps -- 768 Kbps).

Section 6: Clarification Questions and Responses

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 09, 2011 1:46 PM
To: 'Mark Wymer'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: NJ Broadband Data Collection

Mark,
Thanks for the information. Sorry I did not return your call – I just got back from a meeting.

One question – do you have information on typical speeds that are experienced by your customers on each of these plans?

A side note – the NTIA is interested in finer-grained information than this, looking at specific factors that affect satellite coverage, such as terrain and building shadowing. As I understand it, they will be contacting satellite providers at some point in the future to discuss appropriate techniques to model such effects.

Thanks for you participation in the program.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 18, 2011 10:43 AM

To: 'Mark.Wymer@hughes.com'
Cc: 'NJ Broadband Data Collection'
Subject: Hughes NJ Broadband Clarification

Mark,
We need to report data to the NTIA using Provider Name, Doing-Business-As Name and FCC Registration number. The information we retrieved from the FCC is:

Provider Name: Hughes Network Systems, LLC
FRN: 00 17434911

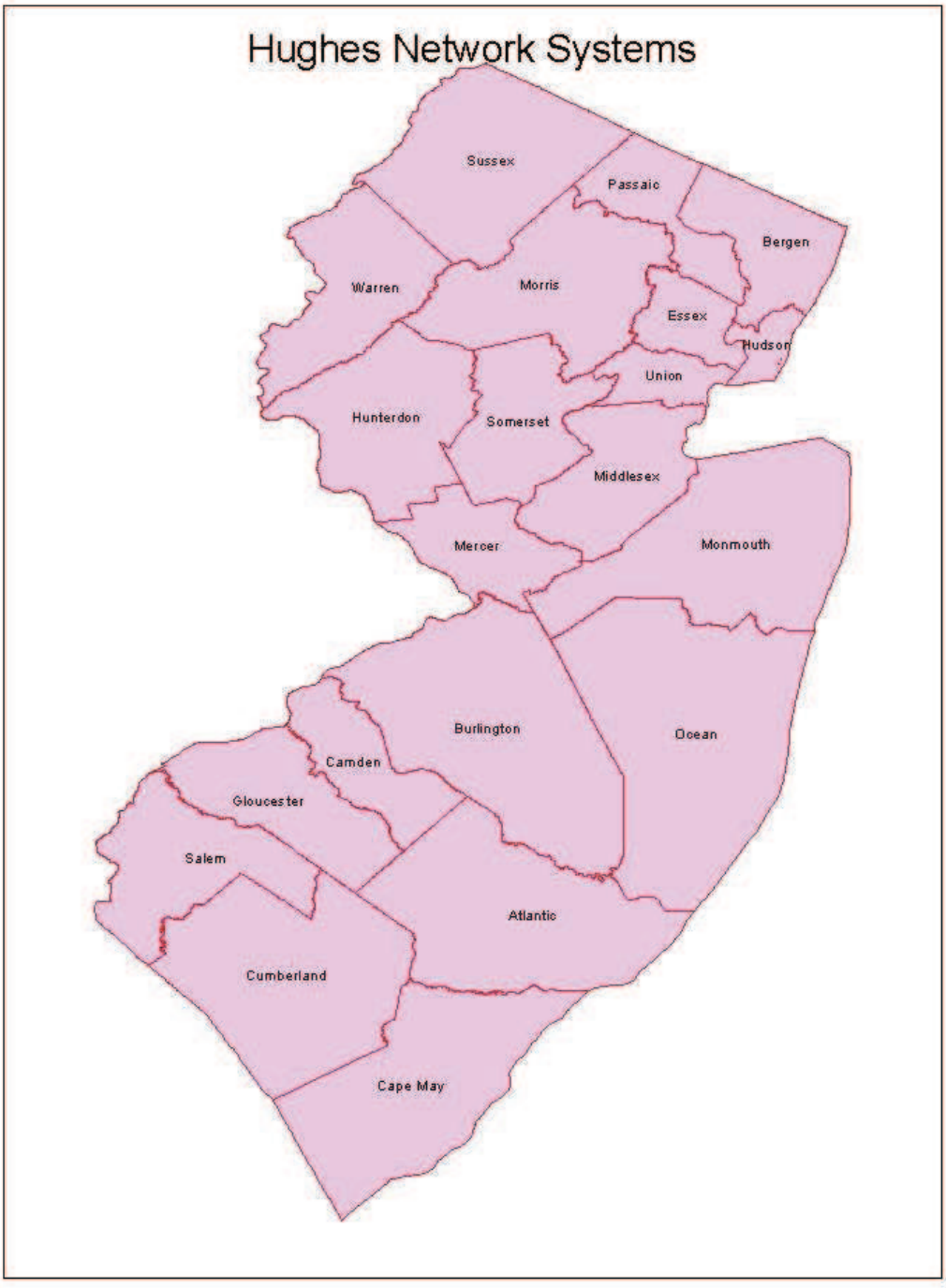
Are these correct? Also, do you have another "doing-business-as" name?

Thanks,

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Leap Cricket
Received: March1, 2011
Submission date: April, 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

86. NDA Status
87. Submission Overview
88. Submission File Details
89. Data Validations and Results
90. Data Transformation and Loading
91. Clarification Questions and Provider Responses
92. Notes and Open Issues

Section 1: NDA Status

Section 2: Submission Overview

AVAILABILITY DATA		
ID	PROVIDER NAME	Leap Wireless International, Inc.
	DBA NAME	Cricket Communications, Inc.
	FRN	0002963528
	Holding company name:	Leap Wireless International, Inc."
	Holding company number:	130730

FOR WIRELESS		
Filetypes	1 Mapinfo file corresponding to NJ terrestrial mobile wireless coverage (type 80)	
Speeds	Type	Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)
	Upstream max adv	yes (for entire shapefile) given in tier
	Downstream max adv	yes (for entire shape) given in tier
	Upstream typical	no.
	Downstream typical	no.

	Subscriber-weighted	no.	
Technology Type	Spectrum : yes		3 (PCS) and 4(AWS)
Comments:			
INTERCONNECTION DATA			
ID			
File size			
Ownership			
Transport Type			
Data Rates/Capacity			
Location			
Comments: no IC data provided.			

Quick loading results:

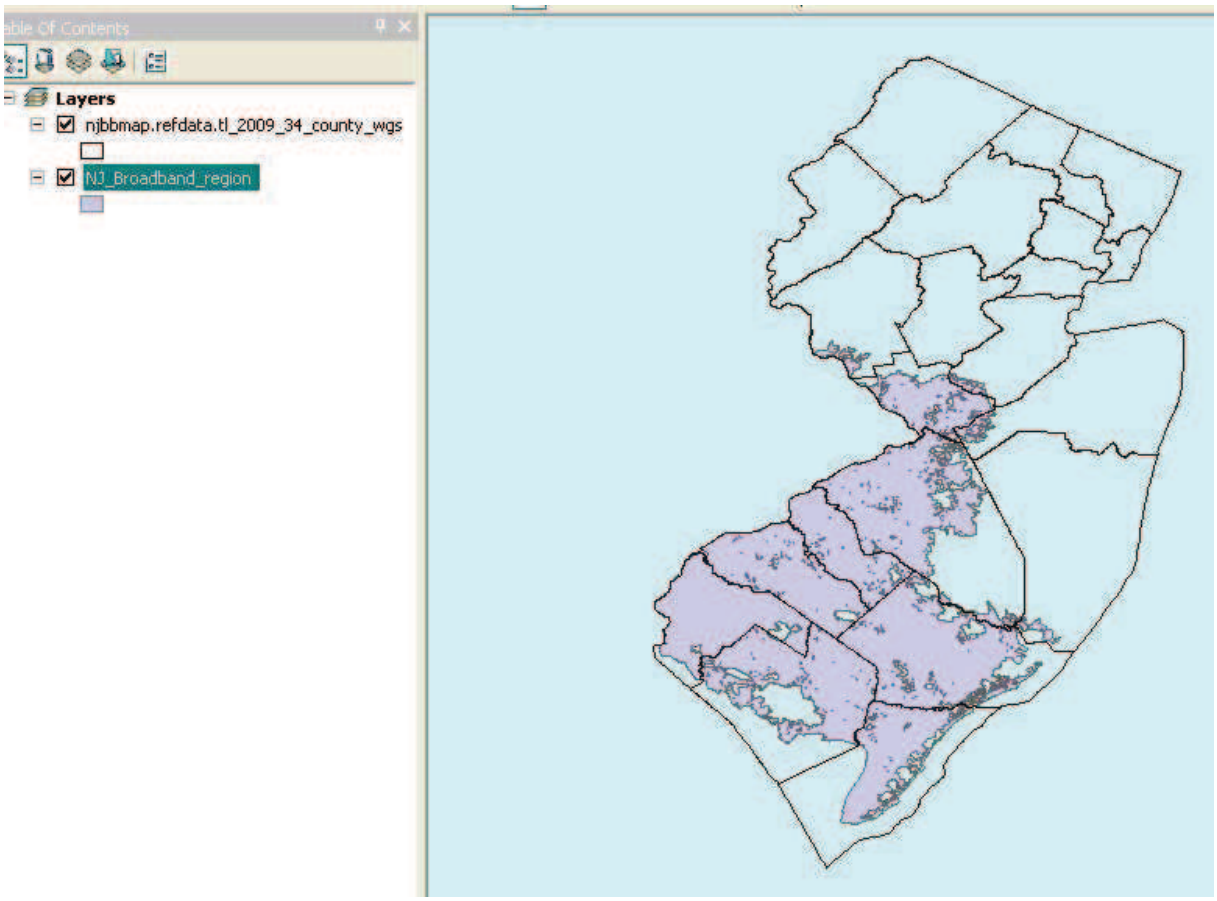


Figure 1. Loading results

Section 3: Submission File Details

1 zip file containing 5 files by (EMAIL, SECURE UPLOAD):

Size	Name
1KB	NJ_Broadband_region.dbf
1KB	NJ_Broadband_region.prj
1KB	NJ_Broadband_region.shx
1443KB	NJ_Broadband_region.shp
2KB	NJ_Broadband_region.TAB

Section 4: Validations and Results

The Mapinfo file contains a single row with a multipolygon shape (see above for preview picture). The columns identify that the technology of transmission is wireless and that two different spectrum ranges are in use.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_Wireless

Loaded from the supplied Mapinfo file, with transformations as s

Table Column	Data Source / Transformation
PROVNAME	As supplied in column provider_name
DBANAME	As supplied in column dba_name
FRN	Set to "130730"
TRANSTECH	As supplied in column technology_of_transmission
SPECTRUM	Set to “4” per translation shown below
MAXADDOWN	As supplied in column downstream_speed.
MAXADUP	As supplied in column upstream_speed..
TYPICDOWN	Not supplied, set to null
TYPICUP	Not supplied, set to null.
STATEABBR	Set to “NJ”
SHAPE	As supplied.

Internal notes on processing:

10. The supplied shape uses geographic coordinate system GCS_WGS_1984, same as that required by the NTIA data model. First attempt at importing via this procedure failed with the error "Linestring or poly boundary is self-intersecting"
    a. Create new, empty feature class with expected XY Coordinate system, expected tolerance, and same schema.
    b. Loaded data to the new feature class from the supplied mapinfo file.
11. Second attempt at importing worked:
    a. Import the supplied mapinfo file to ArcCatalog.

b. Create new, empty feature class with expected XY Coordinate system, expected tolerance, and same schema.
c. Load data to the new feature class from the newly imported feature class

12. Spectrum: Leap provided "Y" value in the columns spectrum_pcs and spectrum_aws. In the NTIA model the AWS spectrum is coded as value 4. In a response to our query, Leap indicated that the different spectrum are in use in different places of their footprint. Unfortunately we do not have the data.

Section 6: Clarification Questions and Responses

Provider does not provide:
1. typical speeds
2. susbscriber weighted averages
3. interconnection data

Provider provides 2 spectrum values for the coverage shape (PCS and AWS). Request separation of the shapes for these different technologies and check on speeds.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 04, 2011 1:33 PM
To: 'dougwhite@cricketcommunications.com'
Cc: 'ConnectingNJ@research.telcordia.com'
Subject: NJBB Clarification Questions

Doug,
We have reviewed the data you submitted to the NJ Broadband mapping program and have a few clarification questions:

1. You include two spectrum values in the data you submitted. Are those two spectrum bands used uniformly throughout the area specified by the shape?
2. The NTIA is encouraging us to request and submit to them subscriber weighted nominal speed (down only) for each county served and middle mile locations. Are you willing to provide this data?

Thanks for your participation in the program.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Douglas White [mailto:dougwhite@cricketcommunications.com]
Sent: Monday, March 14, 2011 6:54 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJBB Clarification Questions
Importance: High

John – please see Cricket's response below. Thanks,
-Doug

Doug White
Manager, Government Affairs
Cricket Communications, Inc.
5887 Copley Drive
San Diego, CA 92111
Phone: 858-882-9394
Fax: 858-882-6080
dougwhite@cricketcommunications.com

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 04, 2011 10:33 AM
To: Douglas White
Cc: ConnectingNJ@research.telcordia.com
Subject: NJBB Clarification Questions

Doug,
We have reviewed the data you submitted to the NJ Broadband mapping program and have a few clarification questions:

3. You include two spectrum values in the data you submitted. Are those two spectrum bands used uniformly throughout the area specified by the shape?
    - No, they are not used uniformly in all the shape area. PCS spectrum band is used only in Mercer and Cumberland counties and AWS in all the rest of the counties with coverage.
4. The NTIA is encouraging us to request and submit to them subscriber weighted nominal speed (down only) for each county served and middle mile locations. Are you willing to provide this data?
    - We will not be providing middle mile data.

Thanks for your participation in the program.

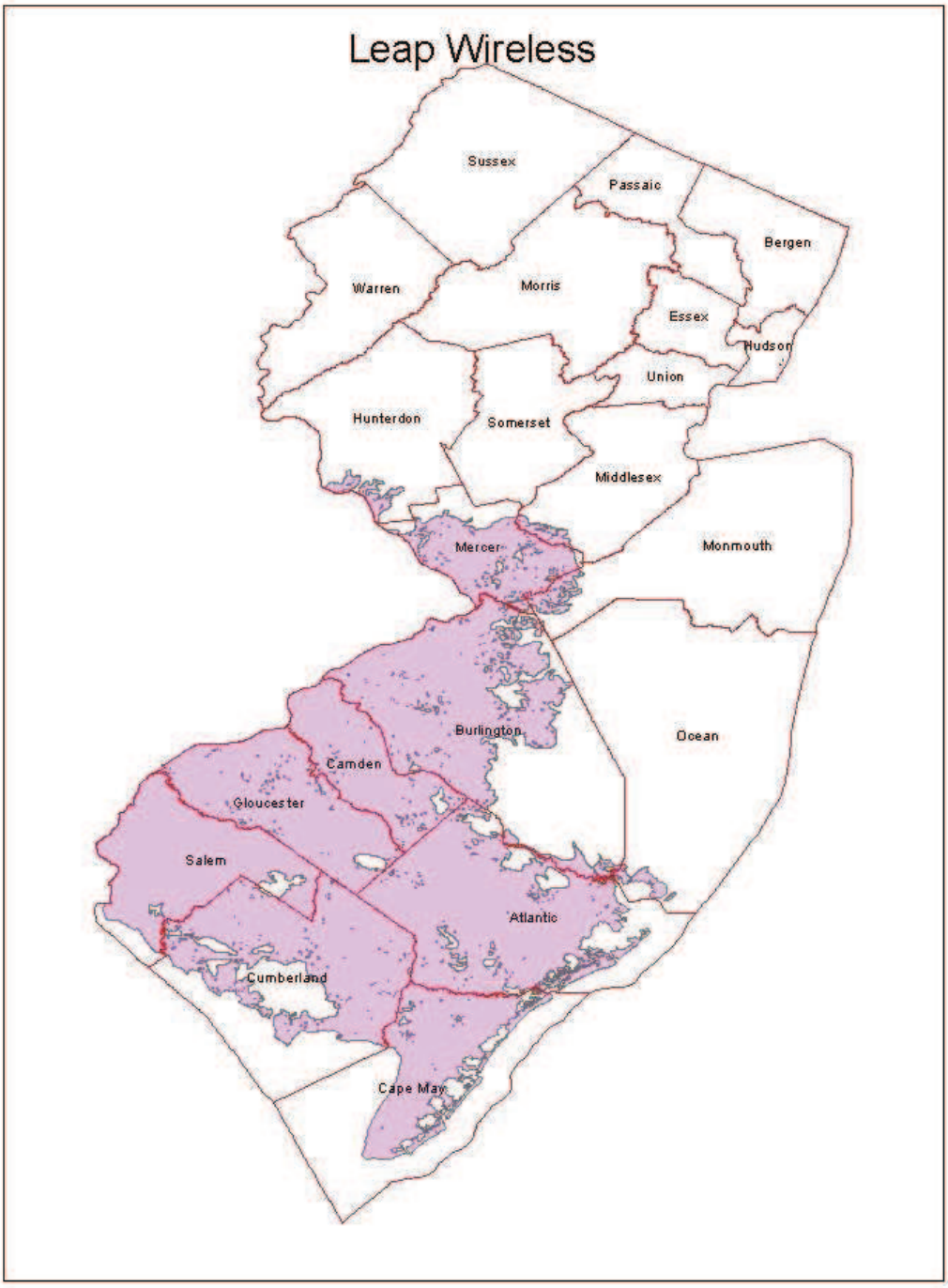
From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 8:44 PM
To: 'Douglas White'
Cc: 'ConnectingNJ@research.telcordia.com'
Subject: RE: NJBB Clarification Questions

Doug,
Can you provide us with separate shape files for the PCS and AWS? I would offer to extract a shape for the counties, but I am sure your coverage areas do not line up exactly with the county boundaries.

Thanks,
John

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Monmouth Telephone and Telegraph
Received: March, 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

93. NDA Status
94. Submission Overview
95. Submission File Details
96. Data Validations and Results
97. Data Transformation and Loading
98. Clarification Questions and Provider Responses
99. Notes and Open Issues

Section 1: NDA Status

Signed NDA is in place with NJ OIT.

Section 2: Submission Overview

<table>
<tr><th colspan="5">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="3">Provider name
“Doing business as” name
FRN</td><td>Monmouth Telephone & Telegraph
same
0004325205</td></tr>
<tr><th colspan="5">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="4">Excel (NJBB_0004325205_AddressLevelAvailability.xls)</td></tr>
<tr><td>File size</td><td colspan="4">272896 bytes, 1071 records</td></tr>
<tr><td>Speeds</td><td colspan="4"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Address</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Address</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Address</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Address</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>None provided</td></tr>
</table></td></tr>
</table>

	Subscriber-weighted-down		Not provided	
Technology Type	Code 30 – other copper line			
End-user specification	Code 4 – Medium or Large Enterprise			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: No middle mile was provided at this time. Monmouth gave the following explanation: Please note that Table 8, "Middle-mile and Backbone Interconnection Points Data", is not included per instructions on page 11 of the Data Submission Specifications" "Middle-mile and Backbone Interconnection Point information should focus on the connectivity at a point. That is, if a point at which network elements or segments are joined would not reasonably offer the possibility of technical connectivity with the network[s], it should not be reported".				

Section 3: Submission File Details

Received 1 zip file containing 3 .xls files and 1 .docx file:

Size **Name**

272896 NJBB_0004325205_AddressLevelAvailability.xls

The file contains 1071 records. Note that data file does not have a header row, but follows (largely) the ADDRESS DATA table from the NTIA "State Broadband Data and Development Grant Program" document. The columns and the corresponding headers are:

A - Provider Name
C - FRN
D-L - Address
M - EndUserCat
N - TransTech
O - MaxAdvDown

P - MaxAdvUp
Q - TypicDown
R - TypicUp

The FRN is missing leading zeros. Very few entries are provided in the 4 digit zip column (L), some do not have the required leading zeros.
It was established (prior interactions) that the DBA is Monmouth Telephone & Telegraph. Certain addresses will need to be fixed for geocoding (also per prior interactions).
Some records have speed tiers of 2 or less.

27136 NJBB_0004325205_CMAAdvertisedAvailability.xls

The file contains 13 records. Note that data file does not have a header row, but follows the CMA data submission template that we posted on the connectingnj web site. The columns and the corresponding headers are:

A - Provider Name
C - FRN
D - CMA
E - TransTech
F - MaxAdvDown
G - MaxAdvUp

27136 NJBB_0004325205_SubscriberWeightedNominalSpeed.xls

The file contains 13 records. Note that data file does not have a header row, but follows the Subscriber-Weighted Nominal Speed data submission template that we posted on the connectingnj web site. The columns and the corresponding headers are:

A - Provider Name
C - FRN
D - CMA
E - TransTech
F - SubsWeightedSpeed

22016 Read Me.doc

Section 4: Validations and Results

Some of the addresses will be difficult or impossible to geo-locate due to format; e.g., 179 Ave at the Common & 11, Shrewsbury, NJ.

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we will discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied Excel spreadsheet. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Monmouth Telephone & Telegraph"
DBANAME	Set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	Set to "0004325205"
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column TransTech
MAXADDOWN	As supplied in column MaxAdvDown
MAXADUP	As supplied in column MaxAdvUp
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

34. Discarded 109 rows because the max adv down speed code was 1 or 2, which is not broadband according to the requirements of the NOFA
35. Geocoded the addresses using the Google and Yahoo geocoders to obtain a Latitude, Longitude pair for each.. Addresses that yielded results with accuracy of 6 or below were excluded; only intersection (7) or rooftop (8) accuracy is acceptable. All addresses were geocoded; none failed.
36. Created an Excel sheet and imported it to a geodatabase table.
37. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
38. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
39. Discarded 197 rows with duplicate census blocks while preserving the greatest speed. These result from multiple customers in the same census block.
40. Discarded 7 large census blocks (greater than 2 square miles).

41. Final record count loaded is 757.

The mechanized procedure for the three steps is described in file GeoExcel_proc.txt.

Section 6: Clarification Questions and Responses

1. Some records in the NJBB_0004325205_AddressLevelAvailability.xls file have maximum advertised download speed tiers of 2 or less. If these values are the correct speeds, then they do not meet the NTIA definition of broadband.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 9:54 AM
To: Betty Booth
Cc: 'lchocolate@monmouth.com'; ConnectingNJ@research.telcordia.com
Subject: Monmouth NJ Broadband Data Clarification

Betty,
We have performed our initial review of your submission to the NJ Broadband mapping program and have a clarification question:

- Several locations included in your list have downstream speed tiers of 2. Can you just clarify which copper service you are using to deliver speeds less than 768 kbps?
- Also with respect to the downstream speed tiers of 2, the NTIA does not consider these speeds to be broadband. We are interested, however, in the maximum speed you advertise in the areas where you offer service. Can you provide us with the maximum advertised speed associated with your copper and fiber services? (If there is more than one type of each service, is it possible to differentiate the type based on the speed information you provided?

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Betty Booth [mailto:bbooth@monmouth.com]
Sent: Monday, March 21, 2011 4:19 PM
To: ConnectingNJ@research.telcordia.com
Cc: ConnectingNJ@research.telcordia.com; lchocolate@monmouth.com
Subject: Re: Monmouth NJ Broadband Data Clarification

Mr. Wullert:

Sorry for the delay of a reply.

Q: Several locations included in your list have downstream speed tiers of 2. Can you just clarify which copper service you are using to deliver speeds less than 768 kbps?

A: T1

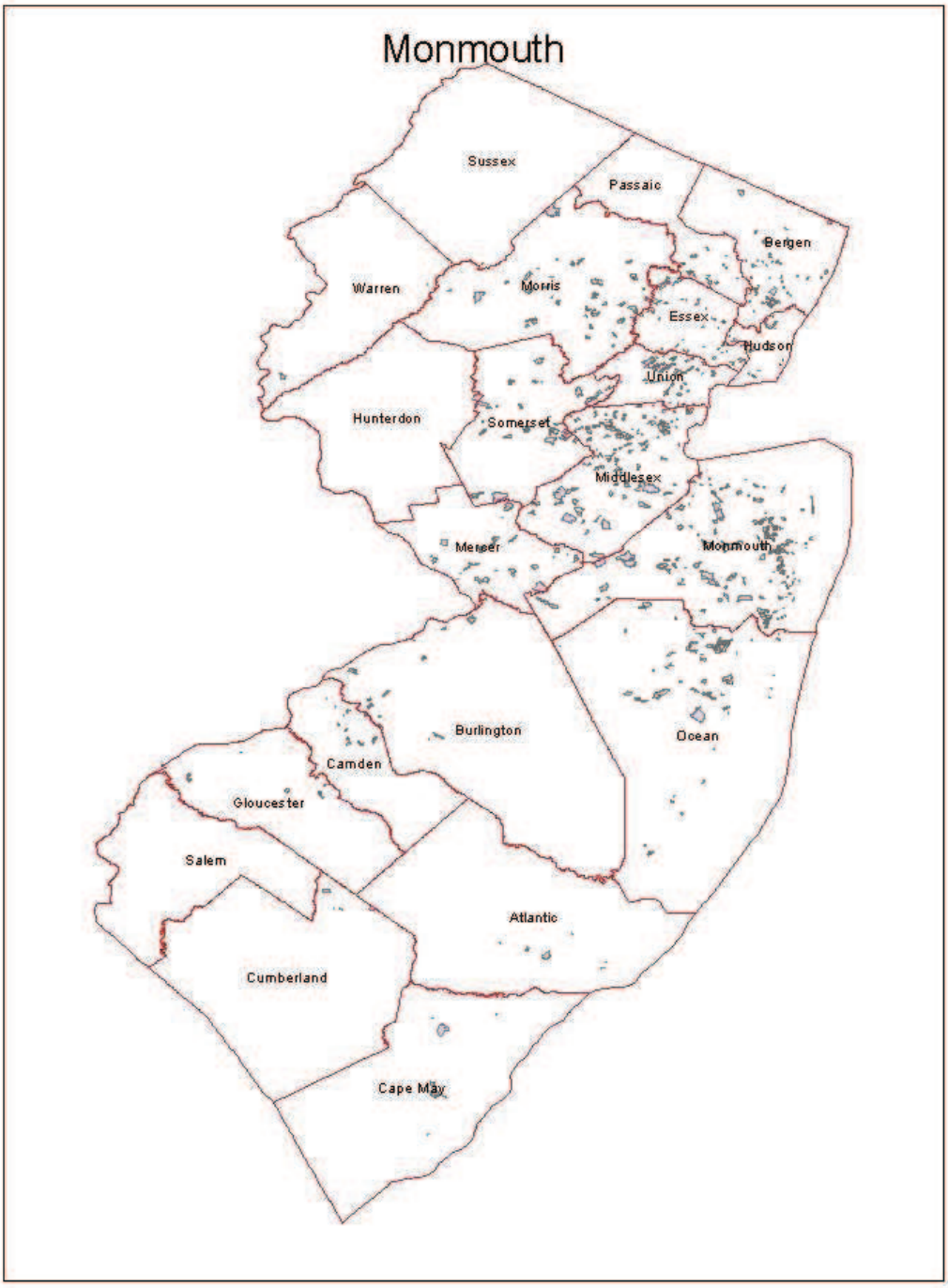
Q: Can you provide us with the maximum advertised speed associated with your copper and fiber services?
A: 100Mb for Fiber and 1.5Mb for copper

Thank you

Betty Booth
Monmouth Telephone & Telegraph

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: One Communications
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

100. NDA Status
101. Submission Overview
102. Submission File Details
103. Data Validations and Results
104. Data Transformation and Loading
105. Clarification Questions and Provider Responses
106. Notes and Open Issues

Section 1: NDA Status

Executed an NDA with NJ OIT.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN
Holding company name
Holding company number</td><td>One Communications
None provided
015-33-7702
One Communications Corporation
140069</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Excel (“Broadband Connections Data as of 12.31.10.xls”)</td></tr>
<tr><td>File size</td><td colspan="3">106,496 bytes (506 rows)</td></tr>
<tr><td>Speeds</td><td colspan="2"><table><tr><th>Type</th><th></th><th>Spatial Resolution: address</th></tr><tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr><tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr><tr><td>Advertised-upstream</td><td></td><td>Address Level*</td></tr><tr><td>Advertised-downstream</td><td></td><td>Address Level *</td></tr><tr><td>Subscriber-weighted-up</td><td></td><td>Not provided</td></tr></table></td><td>Provided table with addresses and speeds at each address. Speed columns are labeled “Maximum downstream speed” and “Maximum upstream speed” with values 1..8.
We determined during last submission to use these values as advertised speeds</td></tr>
</table>

	Subscriber-weighted-down		Not provided	
Technology Type	10 (ADSL), 20 (SDSL), 30 (Other copper)			
End-user specification	All 3 (small business)			
Comments:				
INTERCONNECTION DATA				
ID	Not provided			
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received 1 file by via email:

Size	Name
106,496	Broadband Connections Data as of 12.31.10.xls

Many addresses in this file appear to be for individual customers; some may be addresses of multi-tenant buildings.

Section 4: Validations and Results

The codes in columns end user, tech trans, up speed, and down speed are generally valid. However, several records have down-stream speed tiers of 1 or 2, which are not considered broadband. We will inform the carrier and propose to drop these records.

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we will discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file “One NJ Broadband Connections Data as of 12.31.10.xls”. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “Provider Name”
DBANAME	Not supplied; set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	As supplied in column “FRN”, with leading zeroes added
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology of Transmission
MAXADDOWN	Set to 7, the largest value found in submission
MAXADUP	Set to 7, the largest value found in submission
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

25. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each.
26. Created an excel sheet and imported it to a geodatabase table.
27. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
28. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
29. Discarded 59 rows with duplicate census blocks, which is a common result when several customers are in the same area.
30. Discarded 3 census blocks with an area larger than 2 square miles. We did not discover road segments in these blocks to report them.

The mechanized procedure for the geocoding step is described in file GeoExcel_proc.txt.

Section 6: Clarification Questions and Responses

1. You have several records that have downstream speed tiers of 1 or 2. Note that NTIA does not consider these values to be broadband, so we will drop these records from the submission.
2. The data you reported seems to be specific to customers. Do you advertise or offer higher speeds to those customers over the existing facilities? (Specifically, could these customers upgrade easily to a higher speed if needed?). If so, what upload and download speeds are possible for these customers? (If you have this information, we can use it as "maximum advertised" speeds and use the data you provided as "typical speeds")

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 02, 2011 2:25 PM
To: Cui, Jie
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011

Jie,

We have reviewed your data and have identified a couple of issues that we would like to clarify:

1. You have several records that have downstream speed tiers of 1 or 2. Note that NTIA does not consider these values to be broadband, so we will drop these records from the submission.
2. The data you reported seems to be specific to customers. Do you advertise or offer higher speeds to those customers over the existing facilities? (Specifically, could these customers upgrade easily to a higher speed if needed?). If so, what upload and download speeds are possible for these customers? (If you have this information, we can use it as "maximum advertised" speeds and use the data you provided as "typical speeds")

We appreciate your prompt attention to these questions.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Cui, Jie [mailto:JCui@OneCommunications.com]
Sent: Wednesday, March 02, 2011 2:42 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011

Hi John,

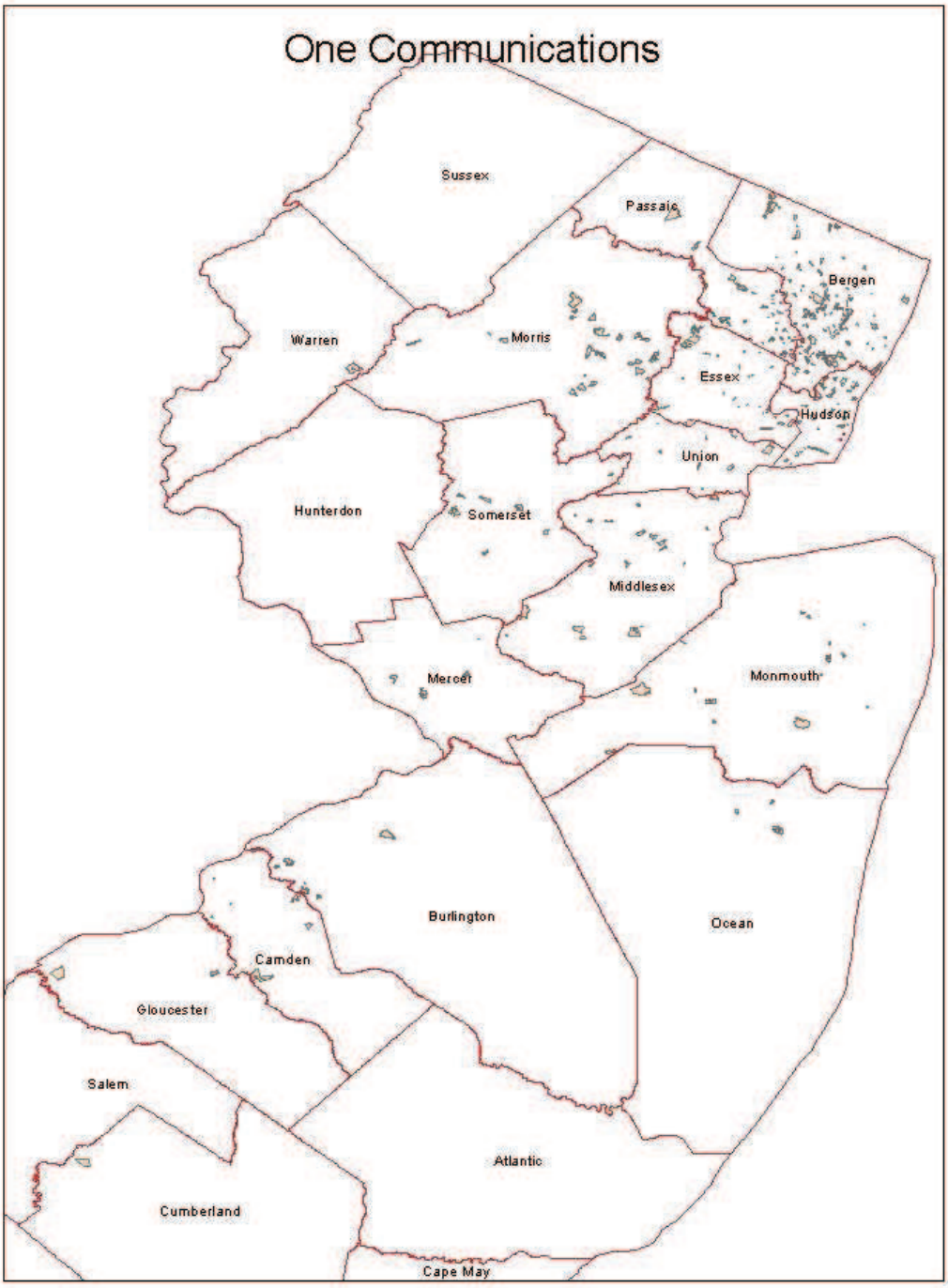
To respond to your 2nd bullet point, this is a question that has been raised by administrators of other states' BB collection programs in the past as well and I have not been able to obtain the maximum advertised/available speeds information by geographical area internally from our engineering department despite several attempts. I do think, in general, most of our customers can upgrade to a higher speed if needed and provided that it is achievable with the facilities that we have.

Thanks,

Jie

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Provider: Sidera Networks (formerly RCN)
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

107. NDA Status
108. Submission Overview
109. Submission File Details
110. Data Validations and Results
111. Data Transformation and Loading
112. Clarification Questions and Provider Responses
113. Notes and Open Issues

Section 1: NDA Status

Executed with NJ OIT.

Section 2: Submission Overview

<table>
<tr><td colspan="4">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Sidera Networks, LLC
Sidera Networks
0006-2544-03</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3">Text</td></tr>
<tr><td>File size</td><td colspan="3">30 rows</td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided (despite the provider’s claim)</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided (despite the provider’s claim)</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Address</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Address</td></tr>
<tr><td>Subscriber-weighted-</td><td></td><td>Not provided</td></tr>
</table></td></tr>
</table>

	up			
	Subscriber-weighted-down		Not provided	
Technology Type	50 (fiber)			
End-user specification	Category 4 (med or lg enterprise)			
Comments:				
INTERCONNECTION DATA				
ID	Provided – see above			
File size	50 rows			
Ownership	Leased			
Transport Type	Fiber			
Data Rates/Capacity	Will use the max. of 3 provided values (Ethernet, SONET, and/or Waves)			
Location				

Section 3: Submission File Details

Received two (2) files by SECURE UPLOAD:

Size **Name**

1805 NJ_Sidera_customer_data_20101231.txt

Given the prior interactions, each row is established to contain an address, end-user category, technology code (50), max advertised down/up speeds and two additional columns: ADVER_DOWNLOAD_SPEED and ADVER_UPLOAD_SPEED, which the provider claims (in their response) to be the typical down/up-load speed. We will NOT use data in these columns as the typical down/up-load speed data.

34304 middle_mile_nj_3-1-2011.xls

Contains 50 rows excluding headers. Each row has an address, building type, statement of Ethernet, SONET, and/or Waves backhaul network speed, building ownership (all leased), and entrance (all fiber).
We will use the max. of the three provided network speed values (Ethernet, SONET,

and Waves) as the serving facility backhaul capacity value.

Section 4: Validations and Results

Customer address data: 30 rows were submitted, 26 could be geocoded, 4 could not. Middle mile data: 50 rows were submitted, 47 could be geocoded, 3 could not. For details see files res_failed.xls and res_mm_failed.xls.

Section 5: Data Transformation and Loading

Loaded from supplied file “middle_mile_nj_3-1-2011.xls”, tab “NJ_Sidera” (50 rows). The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to “Sidera Networks, LLC"
DBANAME	Set to “Sidera Networks”
FRN	Set to “0006254403”
OWNERSHIP	Set to 1 (leased)
BHCAPACITY	Set to 6 (10 Gbps or greater)
BHTYPE	Set to 1 (fiber)
LATITUDE	Created by geocoding the supplied address
LONGITUDE	Created by geocoding the supplied address
ELEVFEET	Set to “0” (zero)
STATEABBR	Set to “NJ”
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Point shape created using ESRI ArcDesktop

Internal notes on processing:

31. Geocoded the addresses using the Google geocoder.
32. Created an excel sheet and imported to a geodatabase table.
33. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
34. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file “RCN_NY_20100630_customer_data.txt” (20 rows). The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Sidera Networks, LLC"
DBANAME	Set to “Sidera Networks”
PROVIDER_TYPE	Set to 1
FRN	Set to “0006254403”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology_Code
MAXADDOWN	As supplied in column Max_Download_Speed
MAXADUP	As supplied in column Max_Download_Speed_1
TYPICDOWN	Set to null, not supplied
TYPICUP	Set to null, not supplied
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

42. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each.
43. Created an Excel sheet and imported it to a geodatabase table.
44. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
45. Created a new feature class and loaded data to correct tolerance value.
46. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
47. Discarded 15 rows with duplicate census blocks while preserving the greatest speed.
48. Loaded 11 rows.

Section 6: Clarification Questions and Responses

1. NTIA specifies four serving facility types (1=Fiber; 2=Copper;3=Hybrid Fiber Coax (HFC); 4=Wireless) for the middle-mile connection points data. You have provided 3 columns referring (we assume) to the serving facilities in you network. One of them is titled 'Waves'. Does that indicate the wireless facility ?

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 16, 2011 4:04 PM
To: 'rich.duquette@rcn.net'
Subject: RCN NJBB Mapping Clarification

Rich,

We have reviewed the data you provided and have one clarifying question:

1. NTIA specifies four serving facility types (1=Fiber; 2=Copper;3=Hybrid Fiber Coax (HFC); 4=Wireless) for the middle-mile connection points data. In your middle mile data, you have provided 3 columns referring (we assume) to the serving facilities in you network. One of them is titled 'Waves'. Does that indicate the wireless facility ?

Thanks for your participation!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Rich Duquette [mailto:RDuquette@rcn.com]
Sent: Wednesday, March 16, 2011 4:09 PM
To: 'ConnectingNJ@research.telcordia.com'
Subject: RE: RCN NJBB Mapping Clarification

Hi John,

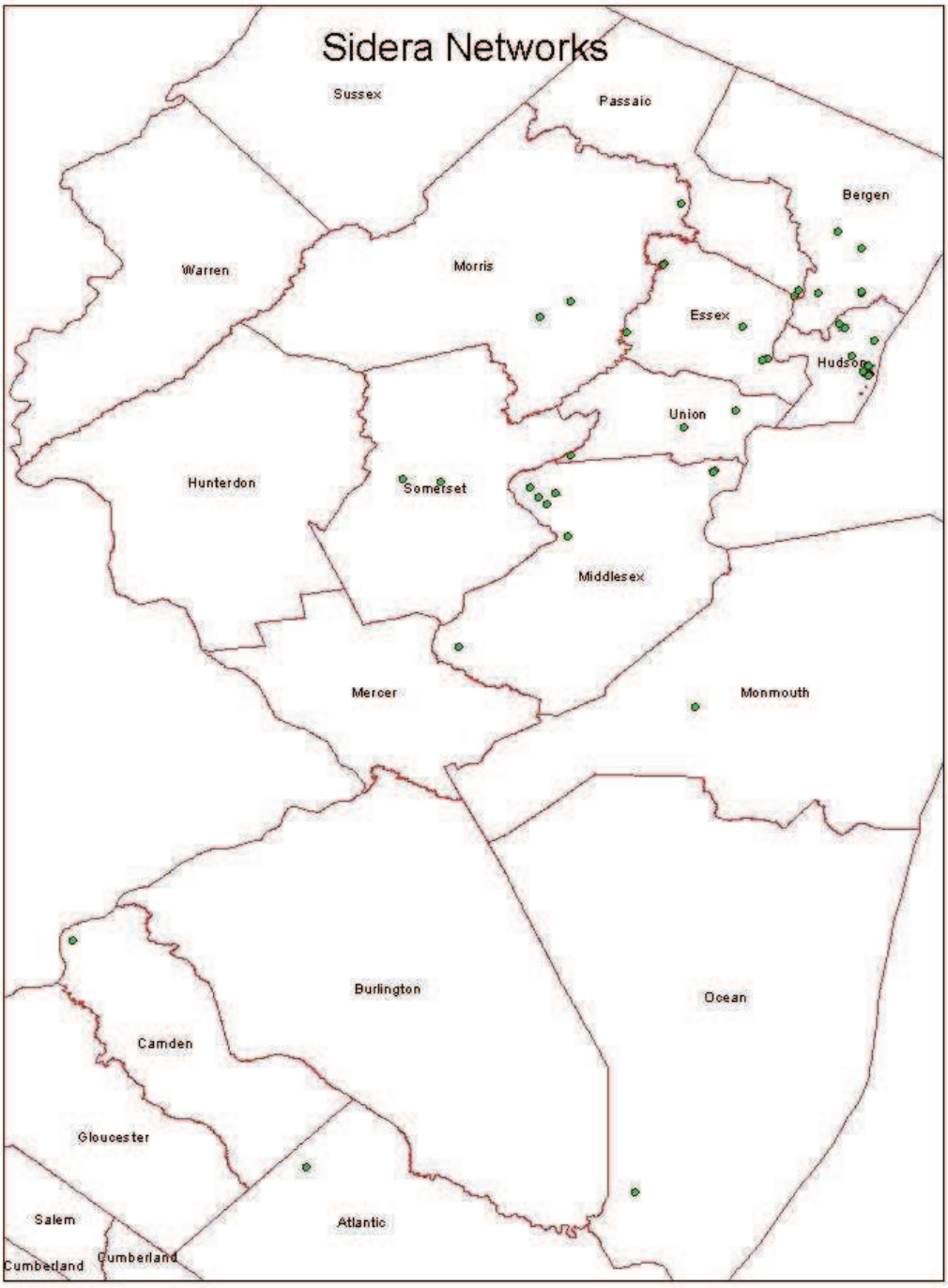
We are a transport company, this is all Fiber (1)

Thanks

Rich

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Connecting New Jersey - Broadband Provider Data Report

Provider: Service Electric Cable TV of Hunterdon
Submission date: April 2011

This report presents details on processing broadband data for delivery to the National Telecommunications and Information Administration (NTIA). This is a stub report, since data from the previous submission was reused unchanged. The complete report from the previous submission begins on the next page. Notable differences from the processing done on the previous submission are listed next.

NTIA Table BB_Service_CensusBlock

4. Dropped the column "reseller".
5. Added the column "provider_type" and populated with value 1 ("Broadband provider as described in the NOFA")

NTIA Table BB_Service_RoadSegment

1. Dropped the column "reseller".
2. Added the column "provider_type" and populated with value 1 ("Broadband provider as described in the NOFA")

Provider Interactions

Tim Himmelright of Service Electric called and spoke to John Wullert on 4 March 2011 and confirmed that their data had not changed since the October data collection cycle and instructed us to use the previous data.

Broadband Provider Data Report

Provider: Service Electric Cable TV of Hunterdon
Received: August 2010
Submission date: October 2010

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

114. NDA Status
115. Submission Overview
116. Submission File Details
117. Data Validations and Results
118. Data Transformation and Loading
119. Clarification Questions and Provider Responses
120. Notes and Open Issues

Section 1: NDA Status

None.

Section 2: Submission Overview

<table>
<tr><th colspan="5">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="3">Provider name
“Doing business as” name
FRN</td><td>Service Electric Cable TV of Hunterdon, Inc.
DBA not provided
0003760014</td></tr>
<tr><th colspan="5">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="4">Text (a letter, not structured data)</td></tr>
<tr><td>File size</td><td colspan="4"></td></tr>
<tr><td>Speeds</td><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td><td rowspan="6">Advertised downstream speeds 1.5, 3, 5, 7 and 10 mbps; up speed 800 kbps.

Typical Speeds were confirmed prior to October submission to be 10-15% below advertised.</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Municipality</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Municipality</td></tr>
<tr><td>Subscriber-weighted-</td><td></td><td>Not provided</td></tr>
</table>

	up			
	Subscriber-weighted-down		Not provided	
Technology Type	Docsis 2.0 (use code 41)			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID	None			
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received email for October submission with information on the municipalities served in entirety, the technology of transmission, and the speed tiers offered to customers. Confirmed that information via phone on March 4, 2011

Section 4: Validations and Results

The sole data to validate is their provided list of municipality names. A sampling was all valid.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_CensusBlock

Loaded based on email received on August 23, 2010. We submitted all census blocks in the named municipalities. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Service Electric Cable TV of Hunterdon, Inc.”

DBANAME	Not supplied; set same as PROVNAME
RESELLER	Set to “N”
FRN	Set to “0003760014”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	Set to 41 (Cable Modem – Other) per email Docsis-2.0
MAXADDOWN	Set to 7 (10Mbps) per email
MAXADUP	Set to 3 (800Kbps) per email
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

49. Created a file with municipality names that match exactly names in the “name” column in the Year 2000 Census Bureau TigerLine database. Primarily this meant changing “Boro” to “Borough”.
50. Joined against reference data to discover census blocks.

NTIA Table BB_Service_RoadSegment

Loaded with street segments in census blocks larger than 2 square miles as listed in Census Bureau TigerLine reference data. The following table explains the transformations that were applied to load the target table.

Table Column	**Data Source / Transformation**
PROVNAME	Set to “Service Electric Cable TV of Hunterdon, Inc.”
DBANAME	Not supplied; set same as PROVNAME
RESELLER	Set to “N”
FRN	Set to “0003760014”
ADDMIN	From reference data
ADDMAX	From reference data
PREDIR	From reference data
STREETNAME	From reference data
STREETTYPE	From reference data
SUFFDIR	From reference data
CITY	From reference data
STATECODE	From reference data
ZIP5	From reference data
ZIP4	From reference data

TRANSTECH	Set to 41 (Cable Modem – Other) per email Docsis-2.0
MAXADDOWN	Set to 7 (10Mbps) per email
MAXADUP	Set to 3 (800Kbps) per email
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	From reference data

Section 6: Clarification Questions and Responses

1. What is the FRN?
2. Should we expect any middle-mile data?

Interaction from August 2010:

Tim,

We have been reviewing the data you submitted to the New Jersey Broadband mapping program. Based on our initial review, we have some questions for you that will help us better understand the data and process it accurately.

1. Could you please provide the FRN for your company?
2. Is there any information you can provide about the typical speeds experienced by your customers, based on your network configurations, monitoring results or general experience?
3. Do you have any middle mile locations to report?

We would appreciate your prompt attention to these questions. If you need further clarification, please feel free to contact me.

Thank you for your participation!

John Wullert
Manager - NJ BB Data Collection
Telcordia Technologies
732-699-2687

Tim Himmel called John Wullert on 8/27/2010. He answered the questions as followed:

- He will have to check on the FRN. He wasn't quite sure what that meant.
- He said that their typical speeds are generally 10-15% below advertised (5.9 to 6.3 Mbps on a 7 Mbps line). (They are going to build out DOCSIS 3 over the next six months to a year to address this. With that, they may over-provision the lines (provide 12 Mbps for 10 Mbps line).

- They do not have any middle mile sites. They connect direct to PenTeleData, who provides Internet access for multiple cable operators.

Tim Himmel called John Wullert on 8/31/2010 to report the FRN number. The number he provided is: FRN 0003-7600-14

From: Tim Himmelwright [mailto:himmelt@sectv.com]
Sent: Friday, March 04, 2011 3:58 PM
To: ConnectingNJ@research.telcordia.com
Subject: Re: NJ BB Data Collection - Spring 2011

John,

Computing data rates are the same as our last report. We have deployed high-speed 2-way internet services in 100-percent of all 12 communities that we serve in New Jersey.

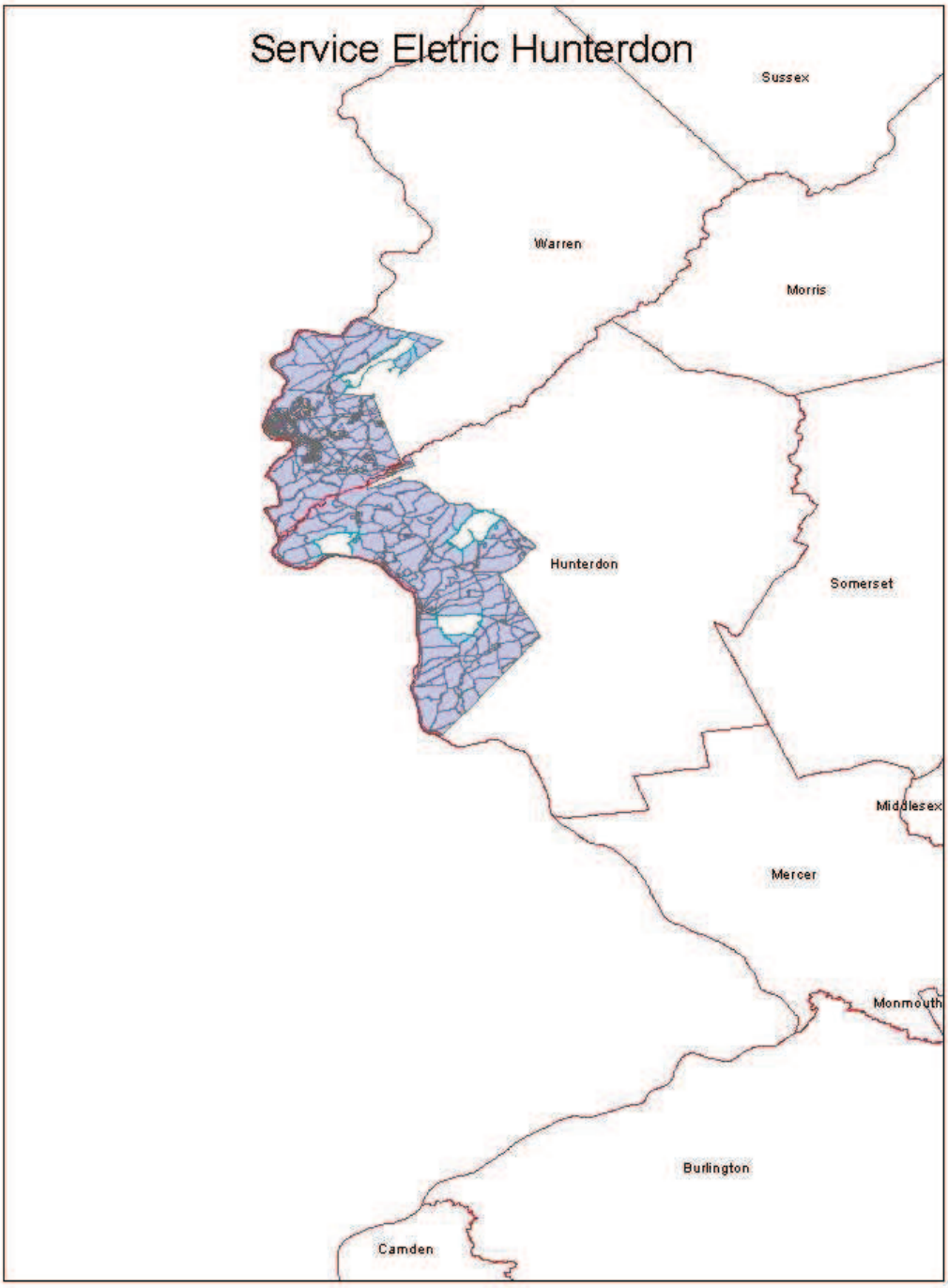
Our platform is still operating on DOCSIS 2.0. However, we are testing DOCSIS 3.0 in two of our Pennsylvania franchises. Once we work out the few small bugs we have encountered, we do plan to migrate our New Jersey properties to DOCSIS 3.0 as well. I will keep you up to date on our progress.

Best Regards,

Timothy S. Himmelwright
Communications & Public Affairs
Service Electric Cable TV & Communications

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Sprint
Received: 23 February 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

121. NDA Status
122. Submission Overview
123. Submission File Details
124. Data Validations and Results
125. Data Transformation and Loading
126. Clarification Questions and Provider Responses
127. Notes and Open Issues

Section 1: NDA Status

Executed with NJ OIT.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td rowspan="3">ID</td><td colspan="2">PROVIDER NAME</td><td>Sprint Nextel Communications</td></tr>
<tr><td colspan="2">DBA NAME</td><td>Sprint</td></tr>
<tr><td colspan="2">FRN:</td><td>0003-77-45-93</td></tr>
<tr><th colspan="4">FOR WIRELESS</th></tr>
<tr><td>Filetypes</td><td colspan="2">shapefile (2 polygons), text file</td><td></td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)</th></tr>
<tr><td>Upstream max adv</td><td>yes (shapefiles for 2 spectrum types)</td></tr>
<tr><td>Downstream max adv</td><td>yes (shapefiles for 2 spectrum types)</td></tr>
<tr><td>Upstream typical</td><td>yes (shapefiles for 2 spectrum types)</td></tr>
<tr><td>Downstream typical</td><td>yes (shapefiles for 2 spectrum types)</td></tr>
<tr><td>Subscriber-weighted</td><td>yes. County-level data for all 21 counties (text file).</td></tr>
</table></td><td></td></tr>
<tr><td>Technology</td><td colspan="2">2 spectrum types described: 3 (PCS) and 5</td><td></td></tr>
</table>

Type	(Broadband radio). Technology of transmission is 80 (Terrestrial mobile wireless).	
Comments: **A somewhat cryptic note is provided saying:** **"The map is created using Sprint's 1XRTT coverage boundary as a proxy for service. The 1XRTT coverage boundary is created by defining the area where the network provides a -98dbm or stronger signal strength."**		
INTERCONNECTION DATA		
ID		
File size		
Ownership		
Transport Type		
Data Rates/Capacity		
Location		
Comments: Instructed to use middle mile data from previous submission		

Quick loading results:

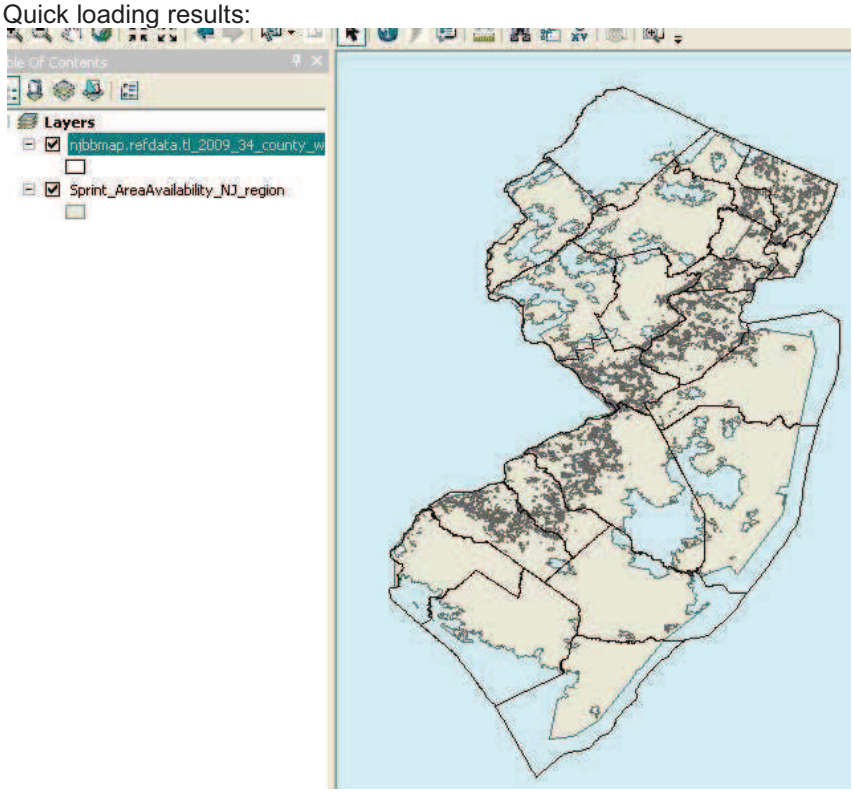


Figure 1. Loading results

Section 3: Submission File Details

First submission provided these 6 files by SECURE UPLOAD:

Size	Name
2KB	Confidential_Sprint_Pricing_NJ.txt
2KB	Sprint_AreaAvailability_NJ_region.dbf
1KB	Sprint_AreaAvailability_NJ_region.prj
5208KB	Sprint_AreaAvailability_NJ_region.shp
1KB	Sprint_AreaAvailability_NJ_region.shx
1KB	readme.txt

Section 4: Validations and Results

Sprint provided a shapefile with two polygons, one each for two data services. Both appear to fall entirely in side New Jersey (see above for initial preview of shapefiles in Arcmap). The slower service is spectrum 3 and rated max advertised down/up of 3/2. The faster service is spectrum 5 and rated max advertised down/up of 5/3.

The "pricing" text file provides subscriber-weighted nominal speed for counties in New Jersey. It does not distinguish between the two services. We are not submitting overview data so will not use this data.

The "readme" text file provides no data for loading.

No middle-mile data was provided. We received email directing us to reuse the middle-mile data from the previous submission.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from the text file “Confidential_Middlemile_NJ.txt” supplied in October 2010. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “providername”
DBANAME	As supplied
FRN	As supplied in column “frn”, after removing hyphens
OWNERSHIP	As supplied
BHCAPACITY	As supplied in column “servingfacilitycapacity”
BHTYPE	As supplied in column “servicefacilitytype”

LATITUDE	As supplied
LONGITUDE	As supplied
ELEVFEET	As supplied in column “elevation” (all zero)
STATEABBR	Set to “NJ”
FULLFIPSID	Year 2000 Census Bureau TigerLine reference data
SHAPE	Created via ArcMap “Add XY Data” feature for lat/long value pairs

Internal notes on processing:

35. Created an excel sheet with the data and imported to a geodatabase table.
36. Created a feature class from the table by creating a Point shape using ArcMap’s “Add XY Data” feature corresponding to each Latitude, Longitude pair.
37. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.
38. The only data imputed was the state abbreviation.
39. Reused the ESRI feature class created in the last round.

NTIA Table BB_Service_Wireless

Loaded from the supplied shapefile “Sprint_AreaAvailability_NJ_region. The following table explains the transformations that were applied.

Table Column	**Data Source / Transformation**
PROVNAME	As supplied in column “proname”
DBANAME	As supplied in column “dbaname”
FRN	As supplied in column “frn” after removing hyphens
TRANSTECH	As supplied in column “techtrans”
SPECTRUM	Set to 3 or 5 per translation shown below
MAXADDOWN	As supplied in column “maxaddnsp”
MAXADUP	As supplied in column “maxadupsp”
TYPICDOWN	Set to null
TYPICUP	Set to null
STATEABBR	Set to “NJ”
SHAPE	As supplied.

Internal notes on processing:

13. The supplied shape uses geographic coordinate system name GCS_WGS_1984 The NTIA data model requires the same coordinate system. No geographic transformation was required, but the XY Tolerance values differ if the shapefile is imported trivially into the geodatabase. Imported the table schema and the table data in two separate operations, thereby ensuring perfect compatibility with the NTIA data model.
    a. First attempt at import used these steps: create new feature class with appropriate XY coordinate system, tolerance, and columns; then load from original file. This failed with an error message about intersecting geometry.

b. Second attempt at import used these steps: import feature class unchanged, create new feature class with appropriate XY coordinate system, tolerance, and columns; then load from the feature class in the geodatabase. This succeeded.

14. Details on spectrum transformation: Sprint provided input columns: spectrum1, spectrum2, spectrum3, spectrum4, spectrum5, spectrum6, spectrum7. Sprint put a "Y" in columns spectrum3 (representing range 1850-1915 MHz) and spectrum5 (representing range 2496–2690 MHz). The NTIA data model has a single column for spectrum. The corresponding NTIA "SPECTRUM USED" coded values are 3 and 5.
15. The only data imputed was the state abbreviation.

Section 6: Clarification Questions and Responses

1. Clarification about the "note" (see above) might be useful.
2. no interconnection data.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 08, 2011 8:04 AM
To: 'jack.delaney@sprint.com'
Subject: NJ Broadband Mapping Clarification

Jack,
We have reviewed the data you submitted to the NJ Broadband mapping program. We had two clarification questions:

1. In the last round submission, you included middle mile information, but that was not included with this submission. Can we use the previously submitted data, or could you please supply updated information?
2. You include the note about how the map was created using the 1XRTT coverage boundary. Does this apply to both the 3G and 4G coverage?

We appreciate your participation in the program and ask for your cooperation in responding in a timely manner.

Thanks!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Delaney, Jack L [LEG] [mailto:Jack.Delaney@sprint.com]
Sent: Monday, March 14, 2011 12:10 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJ Broadband Mapping Clarification

John,

You can use the previously supplied info regarding the middle-mile data. I am still working with network to get you an explanation for how they generate the 4G footprint…

Jack Delaney
Manager, Systems Operations
Legal Department
Sprint Nextel
Office: 913-315-9705
Cell: 703-906-9533

From: Delaney, Jack L [LEG] [mailto:Jack.Delaney@sprint.com]
Sent: Friday, March 25, 2011 12:08 PM
To: Wullert, John R II
Subject: FW: 4G Map Generation

John,

Please see below. This is the explanation I got from Clearwire regarding the 4G coverage. This is what they have submitted to NTIA previously.

Does this help?

Thanks – sorry for the delay.

Jack Delaney
Manager, Systems Operations
Legal Department
Sprint Nextel
Office: 913-315-9705
Cell: 703-906-9533

From: Brad Gustafson [mailto:brad.gustafson@clearwire.com]
Sent: Friday, March 25, 2011 10:56 AM
To: Delaney, Jack L [LEG]
Subject: RE: 4G Map Generation

Jack,

I connected with our spectrum guys on this and they have communicated the Clearwire network coverage/description previously to NTIA. Below is the communication. Since Sprint is using Clearwire's network for 4G Services our folks believe the Clearwire submittal to the NTIA alone should be sufficient. But, feel free to reference the below text with the NTIA as/if you wish. Let me know if you have any questions/concerns regarding this and I'll get you connected to the right folks to discuss further. Thanks –

Bg

Clearwire appreciates the opportunity to participate. Attached are map files for Clearwire's WiMAX and

Expedience Coverage in Oregon State. Clearwire operates WiMAX service with respective speeds below in Portland and Salem. All other markets in the attached file operate using expedience technology. Below are some particulars regarding our service that you might need per NTIA form.

Provider Name: Clearwire Corporation
DBA: Clear (WiMAX markets), Clearwire (Expedience Markets)
FRN: 0017775628

Spectrum: Clearwire operates its WiMAX and Expedience network's using 2.5MHz spectrum (Spectrum 5 on the NTIA's list).

WIMAX Speed: Clearwire's WiMAX network delivers average mobile download speeds of 3 to 6 mbps with bursts over 10 mbps.* Wimax up is 1 Mbps

** Speed claims based on download speeds only. Actual performance may vary and is not guaranteed. CLEAR performance claim is based on average download user speeds achieved during tests performed on the CLEAR commercial network by CLEAR. Other carrier performance based on their advertised claims.*

Expedience Speed: Service is offered at Premium (1.5 Mbps down) and Premium Plus (2 Mbps down). 256 kbps up for both premium and premium plus.

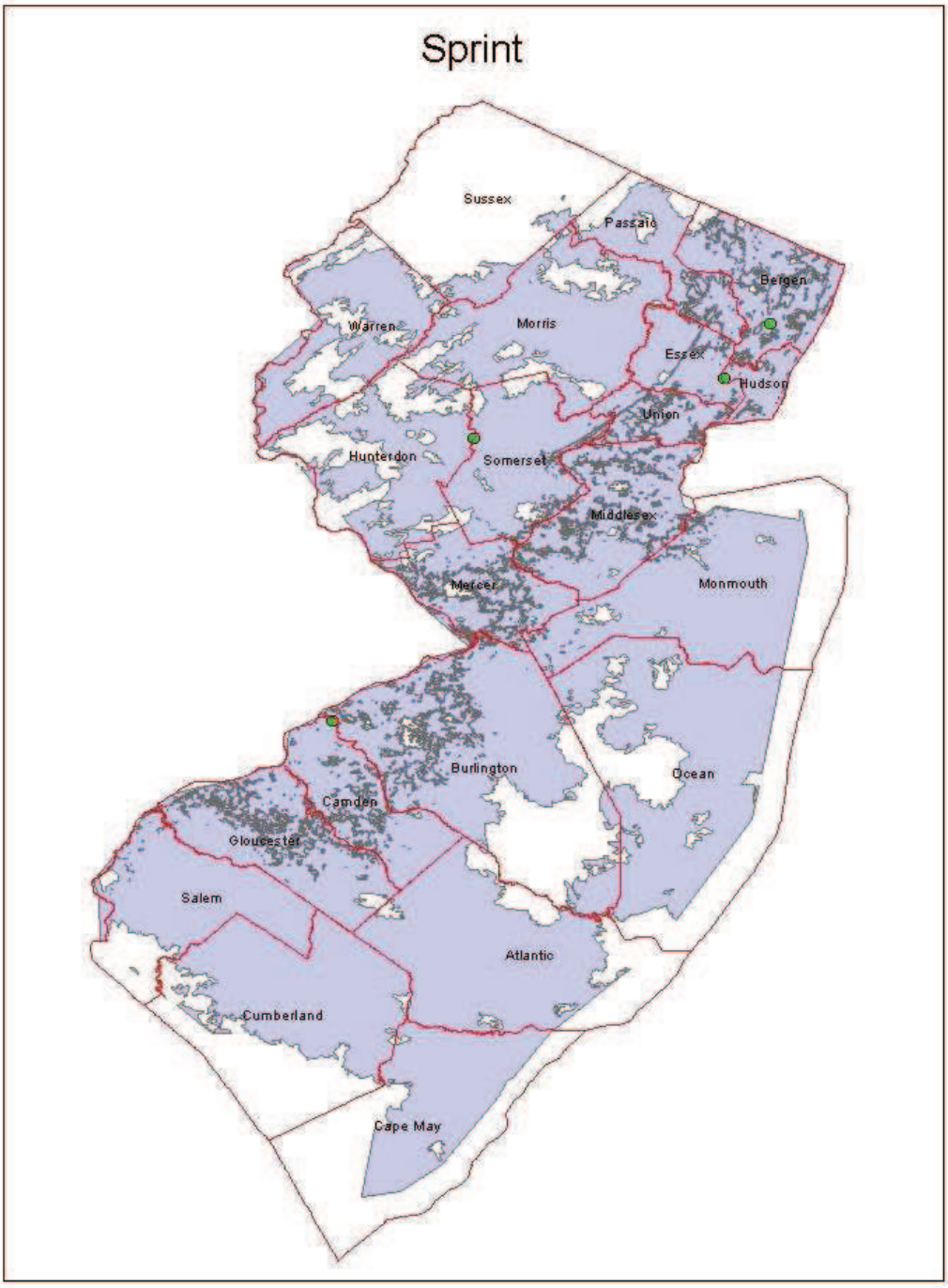
Average Speeds: Clearwire does not disclose speeds as stand-alone average only a range.

FCC Classification: Clearwire is classified as terrestrial mobile wireless-licensed spectrum.

Middle Mile Request: Non-response

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: StarBand Communications Inc.
Received: March 2011
Submission date: March 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

128. NDA Status
129. Submission Overview
130. Submission File Details
131. Data Validations and Results
132. Data Transformation and Loading
133. Clarification Questions and Provider Responses
134. Notes and Open Issues

Section 1: NDA Status

NONE

Section 2: Submission Overview

<table>
<tr><th colspan="5">AVAILABILITY DATA</th></tr>
<tr><td rowspan="3">ID</td><td colspan="3">Provider name</td><td>StarBand Communications Inc.</td></tr>
<tr><td colspan="3">“Doing business as” name</td><td>Not provided</td></tr>
<tr><td colspan="3">FRN</td><td>0005087457</td></tr>
<tr><th colspan="5">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="4"></td></tr>
<tr><td>File size</td><td colspan="4"></td></tr>
<tr><td rowspan="6">Speeds</td><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td><td rowspan="6">Max advertised up is Code 2 (256 Kbps), down is Code 3 (1.5 Mbps)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td></td></tr>
<tr><td>Advertised-downstream</td><td></td><td></td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>256Kbps</td></tr>
</table>

	Subscriber-weighted-down		1.5Mbps	
Technology Type	Code 60 (Satellite)			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: Not provided				

Section 3: Submission File Details

Received email explaining their service offering. Satellite service is provided in all of New Jersey.

On subscriber weighted values, they say:
"Since we have only 1 service that meets the definition of broadband service, the weighted average is the same as the average for that service. Upload speed is 256 Kbps and download speed is 1.5Mbps."

Section 4: Validations and Results

No rows of data need to be validated.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_Wireless

Loaded county shapes from reference data for counties in the State of New Jersey

based on emailed statements that all counties are covered. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "StarBand Communications Inc."
DBANAME	Set to "StarBand"
FRN	Set to 0005087457
TRANSTECH	Set to 60
SPECTRUM	Set to 7 per translation shown below
MAXADDOWN	Set to 4, see below.
MAXADUP	Set to 2, see below.
TYPICDOWN	Not provided, set to null
TYPICUP	Not provided, set to null
STATEABBR	Set to “NJ”
SHAPE	County shape read from reference data.

Internal notes on processing:

16. Spectrum: No statement was provided. The NTIA data model has a single column for spectrum. Satellite corresponds to NTIA “SPECTRUM USED” code value 7.
17. Speeds: The maximum advertised speeds provided in the emailed brochure are as discussed above For max adv speeds we encoded the submitted down speed as value 4 (range 1.5-3 Mbps) and encoded the submitted up speed as value 2 (range 200 Kbps -- 768 Kbps).

Section 6: Clarification Questions and Responses

1. What is DBA name if different than provider name?

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 18, 2011 10:51 AM
To: 'Lesley Cooper - McLean'
Cc: 'NJ Broadband Data Collection'
Subject: Starband NJBB CLarification

Lesley,
One quick clarification: we have your provider name as Starband Communications Inc. Do you have any other “doing-business-as” name that we should include in the submission to the NTIA?

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Lesley Cooper - McLean [mailto:Lesley.Cooper@Spacenet.com]
Sent: Tuesday, March 22, 2011 5:48 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Starband NJBB CLarification

John,

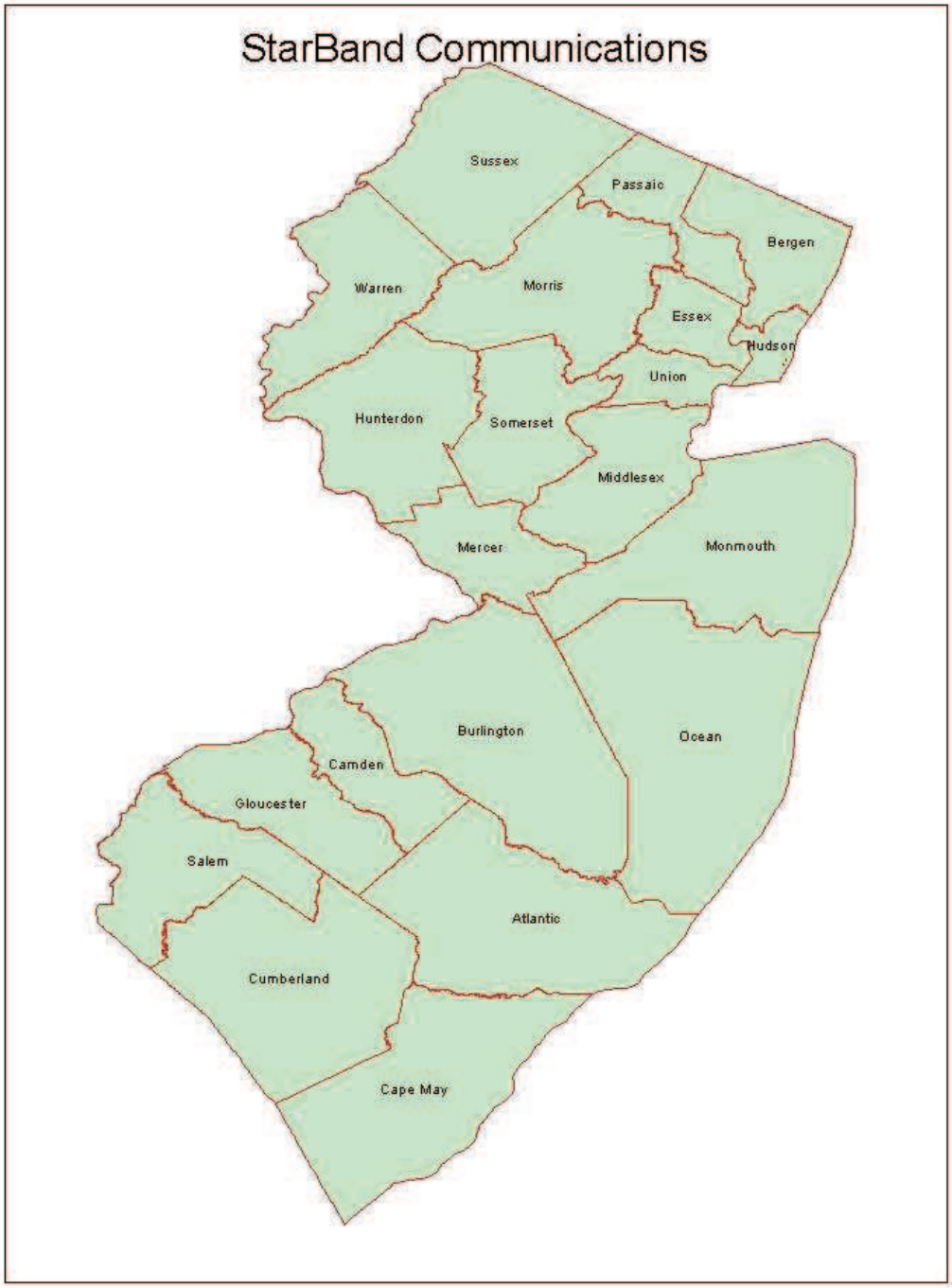
No, we do not. StarBand is the provider of consumer broadband. StarBand is a part of another company, Spacenet Inc., but Spacenet is not a provider of consumer broadband services.

Please let me know if you have any further questions.

Lesley

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Service Electric Cable TV of Sparta
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

135. NDA Status
136. Submission Overview
137. Submission File Details
138. Data Validations and Results
139. Data Transformation and Loading
140. Clarification Questions and Provider Responses
141. Notes and Open Issues

Section 1: NDA Status

No NDA executed.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Service Electric Cable TV of NJ Inc.
Service Electric Broadband Cable
0005007125</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3">Text</td></tr>
<tr><td>File size</td><td colspan="3">9728 bytes</td></tr>
<tr><td>Speeds</td><td colspan="3">
<table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Municipality</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Municipality</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Municipality</td></tr>
</table>
</td></tr>
</table>

	Subscriber-weighted-down		Municipality	
Technology Type	Docsis 3.1 (will use code 40)			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID				
File size	Several addresses provided			
Ownership	Not provided			
Transport Type	Fiber			
Data Rates/Capacity	One says “Fiber 10 gbps”; others have no statement - Clarified this via email. See answers below.			
Location	Address			
Comments:				

Section 3: Submission File Details

Received one (1) file by EMAIL:

Size **Name**
9728 Broadband data Information.xls

Received a spreadsheet with information on the municipalities served in entirety, the technology of transmission, the modem speeds offered to customers, and some connection points.

We will gather all the census blocks in the municipality based on the TigerLine reference data and report those shapes in the BB_service_censusblock table.

Section 4: Validations and Results

Municipality names were normalized to agree with Census Bureau reference data.

In this submission the speeds appear to be provided in a straightforward fashion as Max.Down/MaxUp values, the ‘Combined’ value can probably be ignored.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from 8 rows in the supplied Excel spreadsheet. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to “Service Electric Cable TV of NJ Inc.” per email response
DBANAME	Set to “Service Electric Broadband Cable” per email response
FRN	Set to “0005007125” per email response
OWNERSHIP	Set to 0 to indicate owned per email
BHCAPACITY	Set to null, not provided
BHTYPE	Set to null, not provided
LATITUDE	Created by geocoding the supplied address
LONGITUDE	Created by geocoding the supplied address
ELEVFEET	Set to “0” (zero)
STATEABBR	Set to “NJ”
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Created using ESRI ArcDesktop

Internal notes on processing:

40. Created an excel sheet and imported to a geodatabase table.
41. Added points corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
42. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

Loaded based on the supplied file “Broadband data Information.xls”. We submitted all census blocks less than 2 square miles in the named municipalities. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Service Electric Cable TV of NJ Inc.” per email response
DBANAME	Set to “Service Electric Broadband Cable” per email response
PROVIDER_TYPE	Set to 1
FRN	Set to “0005007125” per email response
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)

BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	Set to 41 (Cable Modem – Other) per file
MAXADDOWN	Set to code 7 per max speed 30Mbps on web site
MAXADUP	Set to code 4 per max speed 2Mbps on web site
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

51. Created a file with municipality names that match exactly names in the “name” column in the Year 2000 Census Bureau TigerLine database. Primarily this meant changing “Boro” to “Borough”.
52. Joined against reference data to discover census blocks, for a total of 4,135 blocks.

NTIA Table BB_Service_RoadSegment

Loaded with street segments in census blocks larger than 2 square miles as gathered from Census Bureau TigerLine reference data. The following table explains the transformations that were applied to load the target table.

Table Column	**Data Source / Transformation**
PROVNAME	Set to “Service Electric Cable TV of NJ Inc.” per email response
DBANAME	Set to “Service Electric Broadband Cable” per email response
PROVIDER_TYPE	Set to 1
FRN	Set to “0005007125” per email response
ADDMIN	From reference data
ADDMAX	From reference data
PREDIR	Set to null, not available in reference data
STREETNAME	From reference data
STREETTYPE	Set to null, not available in reference data
SUFFDIR	Set to null, not available in reference data
CITY	From reference data
STATECODE	Set to "NJ"
ZIP5	From reference data
ZIP4	Set to null, not available in reference data
TRANSTECH	Set to 41 (Cable Modem – Other) per email Docsis-2.0
MAXADDOWN	Set to code 7 per max speed 30Mbps on web site
MAXADUP	Set to code 4 per max speed 2Mbps on web site
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	From reference data

Internal processing notes:

3. Discovered all street segments that touch census blocks larger than 2 square miles using the census block list discovered as discussed for table BB_Service_Censusblock.
4. Joined against reference data to discover street segment, for a total of 2,223 entries.

Section 6: Clarification Questions and Responses

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Thursday, March 10, 2011 8:54 AM
To: 'cherie@secable.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: Service Electric of Sparta - NJ BB Data Clarifications

Cherie,
We have reviewed the data you submitted to the NJ Broadband Data Mapping program and have a few clarification questions about the middle mile data you submitted:

4. You list Fiber at 10Gbps with one address in your middle mile list. Do you have this same type of connection at all the locations listed? If not, can you please provide the technology and speed for each location?
5. Do you own or lease the facilities at the interconnection points you have listed?

We appreciate your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: James Galliford [mailto:james.galliford@secable.com]
Sent: Thursday, March 10, 2011 1:13 PM
To: ConnectingNJ@research.telcordia.com
Cc: cherie@secable.com
Subject: Re: FW: Service Electric of Sparta - NJ BB Data Clarifications

Hello John,

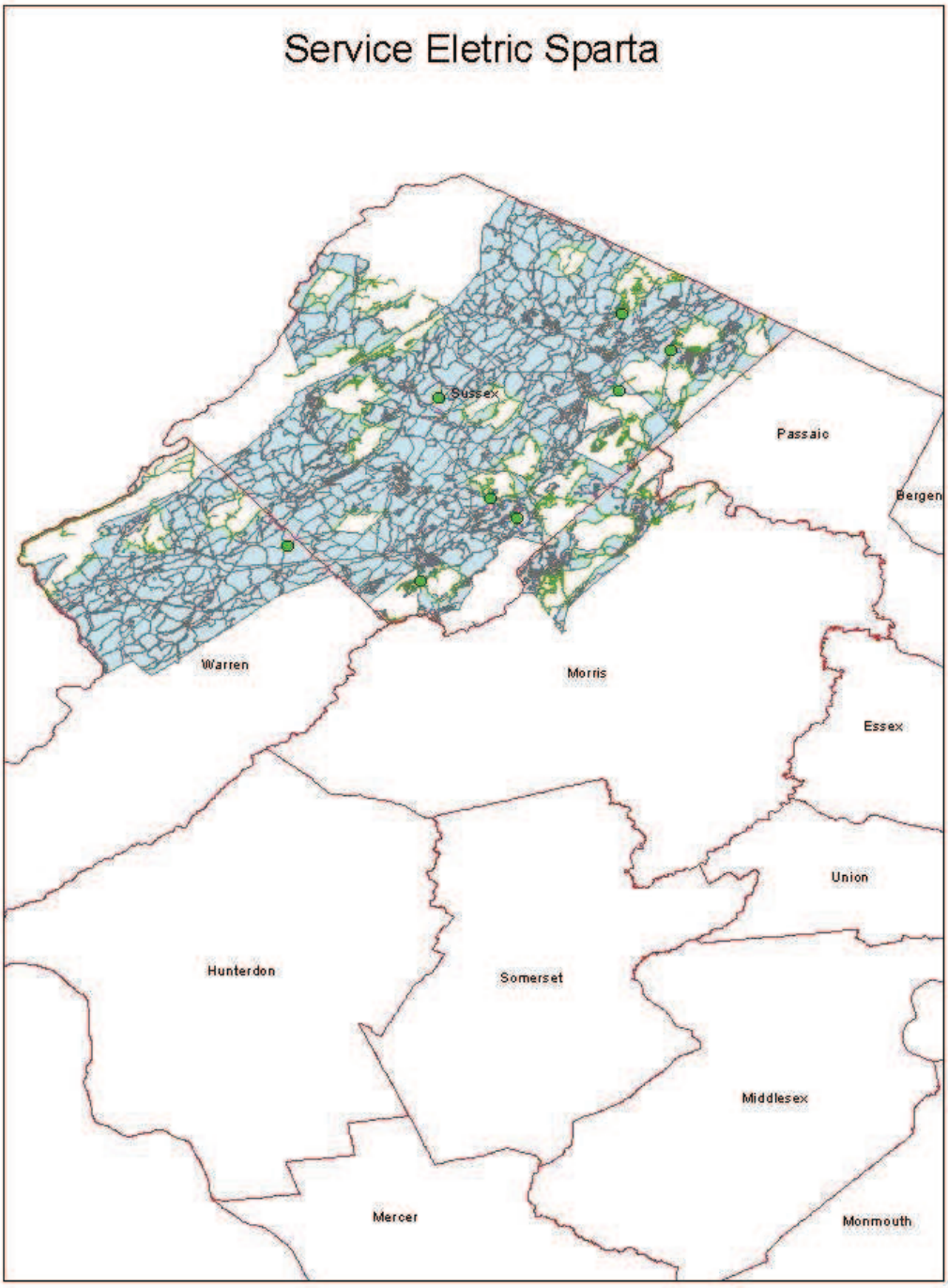
I hope my answers clear up your questions:

1. Further detail into interconnection links:
    1. 320 Sparta Ave, Sparta, NJ & 50 Esto Lane, Hamburg, NJ are interconnected via dual 10Gbps circuits
    2. All other hubsites are connected via dual 1Gbps circuits
2. We own all of the facilities used for data propagation.

Thanks.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Time Warner
Received: February 2010
Submission date: April 2010

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

142. NDA Status
143. Submission Overview
144. Submission File Details
145. Data Validations and Results
146. Data Transformation and Loading
147. Clarification Questions and Provider Responses
148. Notes and Open Issues

Section 1: NDA Status

NDA established with NJ OIT.

Section 2: Submission Overview

AVAILABILITY DATA		
ID	PROVIDER NAME DBA NAME FRN Holding company name Holding company number	Time Warner Cable, LLC Time Warner Cable 0013430244 Time Warner Cable Inc. 131352
FOR WIRELINE		
Filetypes	Time Warner supplied 1 .txt file, a pdf letter, and a shapefile showing coverage on FIPS census block level.	
Speeds	Type: Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode) Upstream max adv: yes (code 5). census block. Downstream max adv: yes (code 9). census block Upstream typical: not provided.	

	Downstream typical	not provided	
	Subscriber-weighted	yes – provided in 2 counties serviced in NJ for 2 cable technologies (40, 41)	
Technology Type	40, 41		
Comments: **'typical' vals not found.**			
INTERCONNECTION DATA: INSTRUCTED TO USE PREVIOUS DATA			
ID			
File size			
Ownership			
Transport Type			
Data Rates/Capacity			
Location			
Comments: **not provided**.			

Quick loading results: 501 polygons in shapefile, spanning 2 counties in NJ.

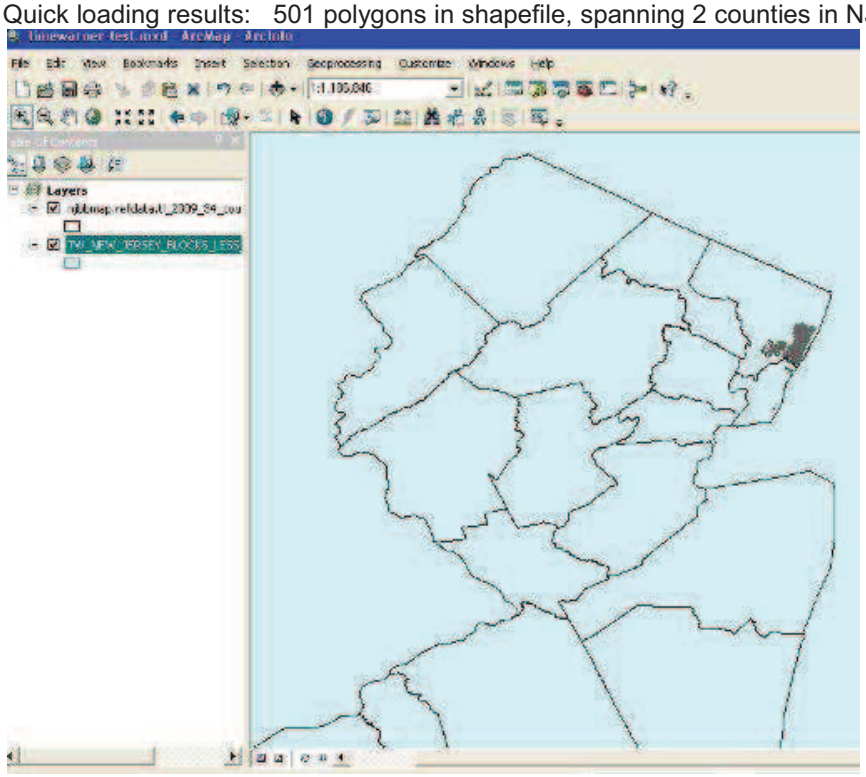


Figure 1. Loading results

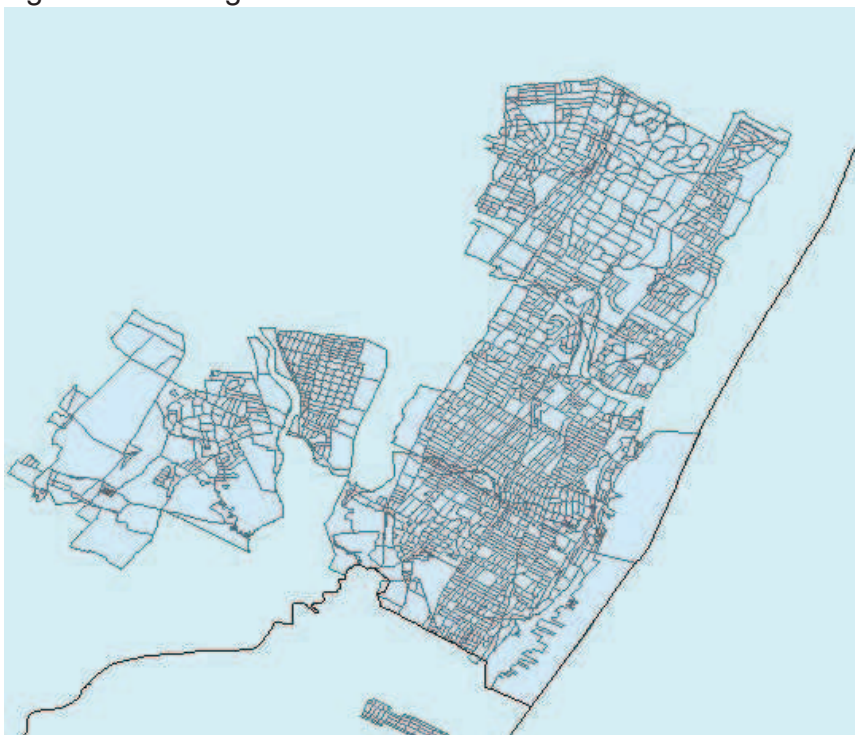


Figure 2. Zoom in on provided data

Section 3: Submission File Details

Received 5 (key) files by (EMAIL, SECURE UPLOAD):

Size	Name
1KB	0013430244_blendedaverage_NJ_12312010.txt
620KB	TW_NEW_JERSEY_BLOCKS_LESS_THAN_2MI_JAN_2011.dbf
1KB	TW_NEW_JERSEY_BLOCKS_LESS_THAN_2MI_JAN_2011.prj
510KB	TW_NEW_JERSEY_BLOCKS_LESS_THAN_2MI_JAN_2011.shp
15KB	TW_NEW_JERSEY_BLOCKS_LESS_THAN_2MI_JAN_2011.shx

Section 4: Validations and Results

File " 0013430244_blendedaverage_NJ_12312010.txt"

Contains name, DBA, FRN, county, state, technology of transmission (values 40 and 41), and subscriber-weighted nominal speed. As of this round we are not submitting overview data, so we will not use the SWNomSpeed values.

Shape “TW_NEW_JERSEY_BLOCKS_LESS_THAN_2MI_JAN_2011” in the shapefile "0013430244_area_availability_NJ_12312010" (1,899 rows)

See above for preview pictures. Shapes use XY coordinate system GCS_North_American_1983. Provides census-block shapes and associated speed data. All census block IDs are length 15, suggesting they are Year 2000 Census geometry. Only technology code 40 is present. Maximum advertised speed codes are present, which is a change from the previous submission. Typical speed codes are all zero like the previous submission; we will not submit typical speeds. Has notably fewer rows than in the last submission, possibly because rows are not present for tech code 41?

NOT PRESENT - SEE PREVOUS DATA REPORTS

- Middle-mile data - we will reuse data from the June 2010 submission per clarification email.
- Typical upstream/downstream values not provided and will not be submitted.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from supplied file “0013430244_middlemile_NJ_06302009.txt” (19 rows, only 1 in New Jersey), as received in June 2010. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to “Time Warner Cable LLC” (“LLC” was missing)
DBANAME	As supplied in column ”DBAName”
FRN	Set to “0013430244”
OWNERSHIP	As supplied in column ”Ownership”
BHCAPACITY	As supplied in column ”Serving Facility Capacity”
BHTYPE	As supplied in column ”Serving Facility Type”
LATITUDE	As supplied in column “Latitude”
LONGITUDE	As supplied in column “Longitude”
ELEVFEET	As supplied in column “Elevation”
STATEABBR	Set to “NJ”
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau reference data
SHAPE	Point corresponding to Lat, Long created using ESRI ArcDesktop

Internal processing notes from prior report:

43. Created an excel sheet and imported to a geodatabase table.
44. Added points corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
45. We dropped all locations outside the New Jersey state boundary, leaving just one. In this row, the elevation value is 30, and we were told in June 2010 that the connection point is on the 7th floor of a building, so we did not change the value.
46. Added a column with the ID of the containing Year 2000 Census block via a spatial join of the points and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied shape file. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Time Warner Cable LLC” (“LLC” was missing)
DBANAME	As supplied in column ”DBAName”
PROVIDER_TYPE	Set to 1
FRN	Set to “0013430244”
STATEFIPS	Set to “34”
COUNTYFIPS	Populated from cb_fips (digits 3-5)
TRACT	Populated from cb_fips (next 6 digits)
BLOCKID	Populated from cb_fips (next 4 digits; dropped 5th character if present)
BLOCKSUBGROUP	Set to null
FULLFIPSID	As supplied in column cb_fips

TRANSTECH	As supplied in column tech_trans
MAXADDOWN	As supplied in column max_ad_dwn
MAXADUP	As supplied in column max_ad_up
TYPICDOWN	Not provided, set to null
TYPICUP	Not provided, set to null
SHAPE	As supplied

Internal notes on processing

1. Geographic coordinate system: The supplied shape uses geographic coordinate system name GCS_North_American_1983. The NTIA transmittal data model requires coordinate system GCS_WGS_1984. To change the projection we applied the geographic transformation NAD_1983_To_WGS_1984_5 (per ESRI KB article 24159). We also had to load the data into a second feature class such that the tolerance value matches the NTIA transmittal model's value of 0.000000002.
2. Census Blocks: The submitted shapefile seems to use Census 2000 geometry, judging from the block IDs that are all 15 characters long. All submitted block IDs are unique and were found in Year 2000 reference data.

Section 6: Clarification Questions and Responses

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 09, 2011 3:18 PM
To: monique.crawford@twcable.com
Cc: 'NJ Broadband Data Collection'
Subject: Time Warner NJ Broadband Data Clarifications

Monique,
We have reviewed the data you submitted to the NJ Broadband data program and have a few questions:

1. In your last submission, you included information on your middle-mile access points. That was not included with the current submission. Is the prior data still valid? If not, could you please provide updated information?
2. Your submission did not include any information on the typical speeds experienced by your customers. Is this information you have available and could provide to us?

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Crawford, Monique [mailto:monique.crawford@twcable.com]

Sent: Wednesday, March 09, 2011 4:35 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: Time Warner NJ Broadband Data Clarifications

Hello John:

Please see my clarifications below. Let me know if you need anything else.

Sincerely,

Monique R. Crawford
Regulatory Affairs
Time Warner Cable
13820 Sunrise Valley Dr.
Herndon, VA 20171

(703) 345-3175 Office
(703) 554-5019 Mobile
(704) 697-4933 E-fax

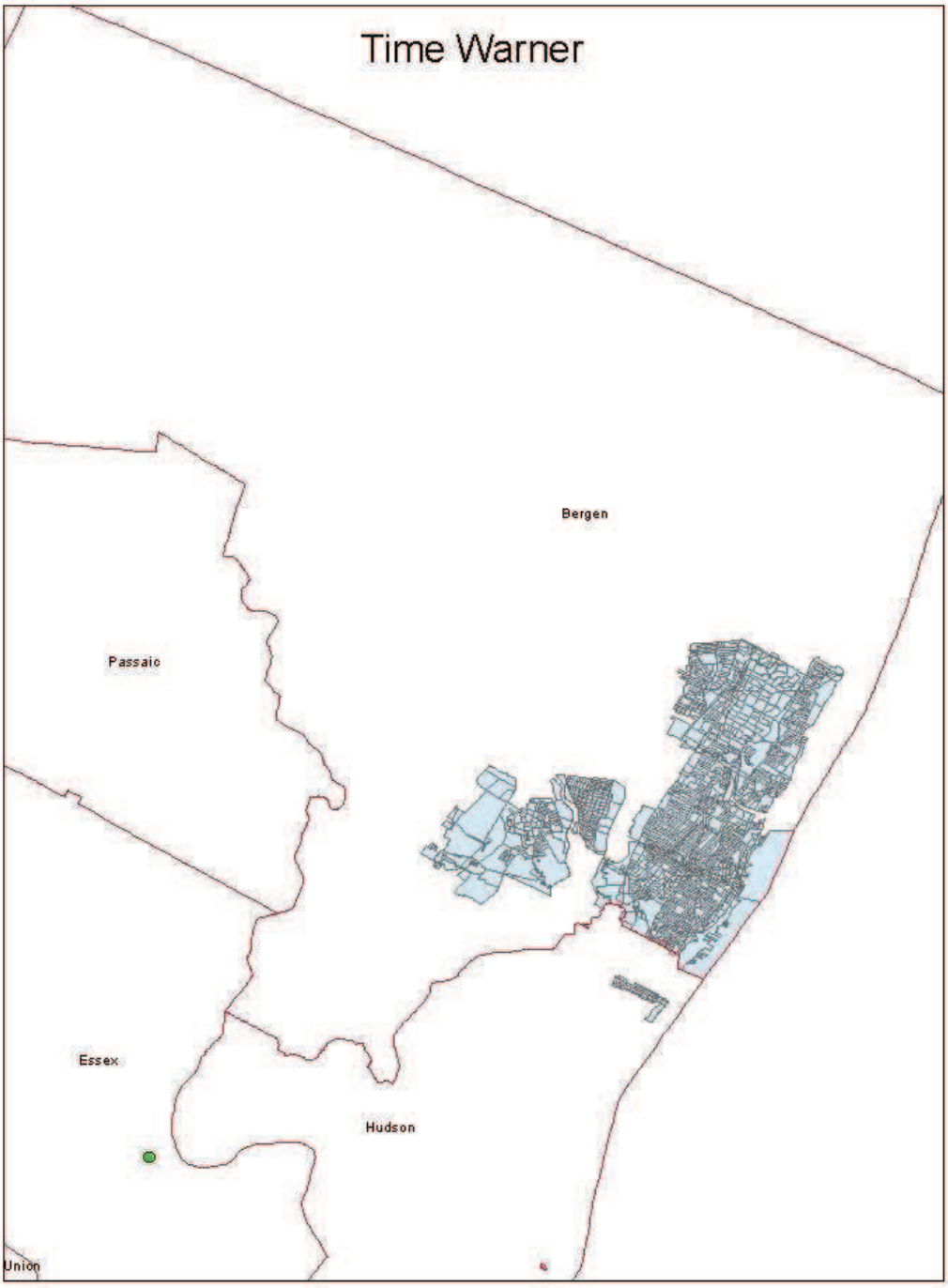
From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 09, 2011 3:18 PM
To: Crawford, Monique
Cc: 'NJ Broadband Data Collection'
Subject: Time Warner NJ Broadband Data Clarifications

Monique,
We have reviewed the data you submitted to the NJ Broadband data program and have a few questions:

1. In your last submission, you included information on your middle-mile access points. That was not included with the current submission. Is the prior data still valid? If not, could you please provide updated information?
   TWC's Middle-Mile data has not changed. Please use the data from the original submission.
2. Your submission did not include any information on the typical speeds experienced by your customers. Is this information you have available and could provide to us?
   Information regarding the typical speeds experienced by customers is not available.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: T-Mobile
Received: 23 February 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

149. NDA Status
150. Submission Overview
151. Submission File Details
152. Data Validations and Results
153. Data Transformation and Loading
154. Clarification Questions and Provider Responses
155. Notes and Open Issues

Section 1: NDA Status

Executed with NJ OIT.

Section 2: Submission Overview

AVAILABILITY DATA		
ID	PROVIDER NAME	T-Mobile USA, Inc.
	DBA NAME	T-Mobile
	FRN	0006945950
	Holding company name	T-Mobile USA
	Holding company number	130403
FOR WIRELESS		
Filetypes	T-mobile supplies .xls, .txt. and shapefiles (availability). They supply 2 sets of shape files: one for HSPA+ coverage and another for 3G coverage.	
Speeds	Type	Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)
	Upstream max adv	yes (shapefiles for both 3G and 4G)
	Downstream max adv	yes (shapefiles for both 3G and 4G)
	Upstream typical	not found.

	Downstream typical	not found.	
	Subscriber-weighted	Provided as a table of vals in mbps (not kbps) correlated to 20 FIPS codes (code 80)	
Technology Type	Spectrum (Mhz, FCC code)		Advanced Wireless Services spectrum (1710-1755 MHz; 2100-2155)
Comments: **'typical' vals not found.**			
INTERCONNECTION DATA			
ID			
File size	10 rows		
Ownership	Code 1		
Transport Type	Type 1		
Data Rates/Capacity	codes 4 and 5		
Location	lat/lons given for all (either A or Z end is in NJ)		
Comments:			

Quick loading results:

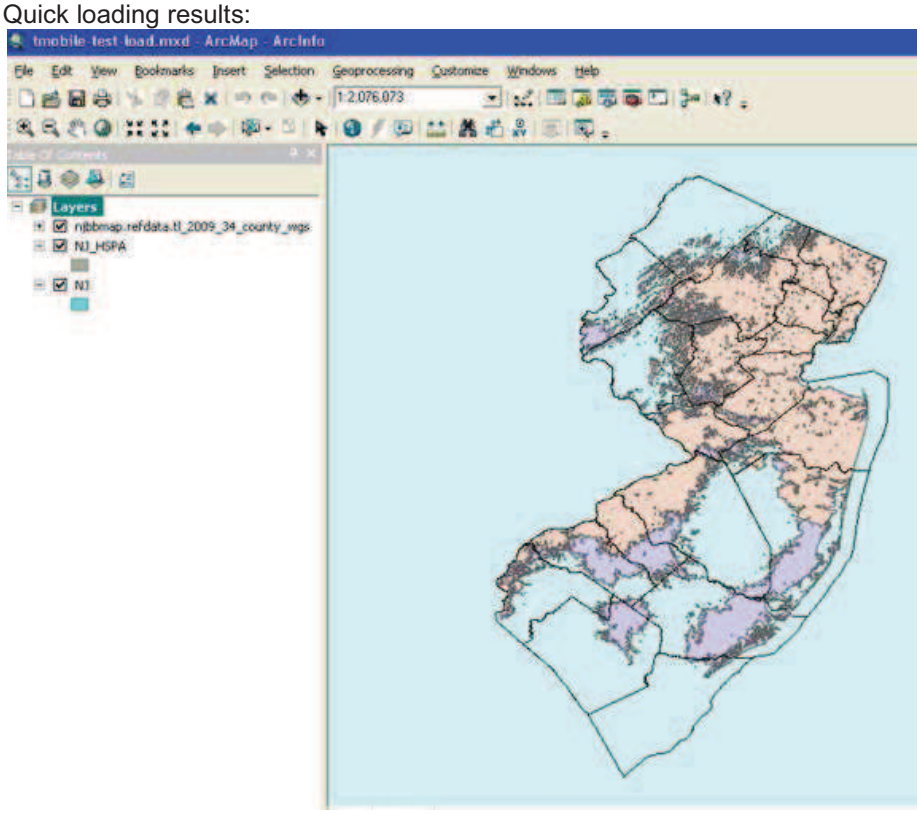


Figure 1. Loading results

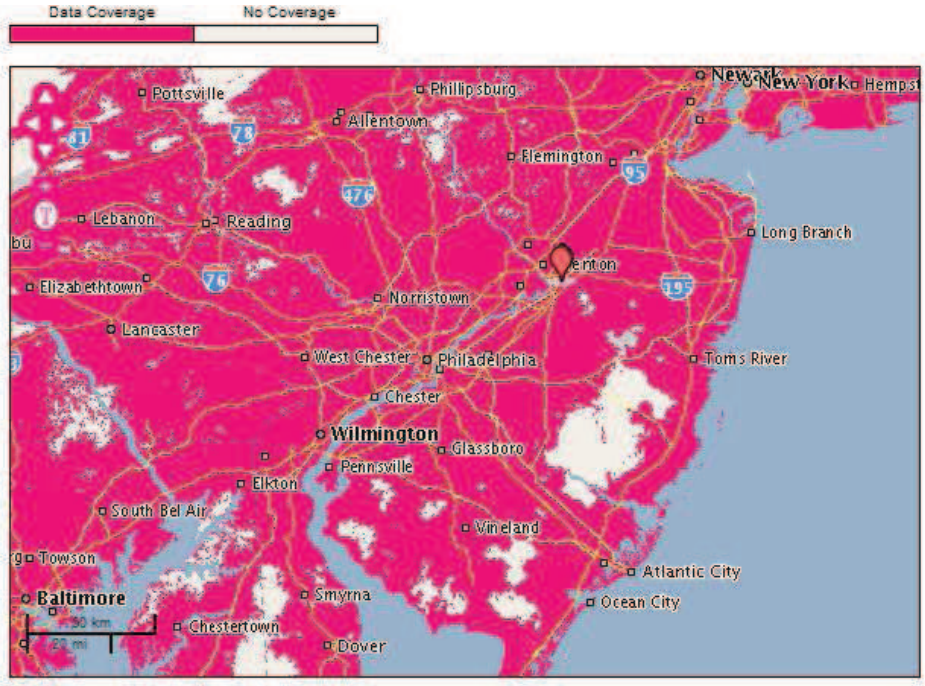


Figure 2. T-Mobile Website (“data coverage”).

Section 3: Submission File Details

Received 13 file by (EMAIL, SECURE UPLOAD):

Size	Name
2152KB	Area_availability.zip (contains below shape files)
3KB	Area_availability.txt
1KB	Middle_mile_NJ.txt
10KB	Middle_mile_NJ.xls
1KB	avg_speed_nj.xls
1KB	NJ.dbf
1KB	NJ.prj
4617KB	NJ.shp
1KB	NJ.shx
1KB	NJ_HSPA.dbf
1KB	NJ_HSPA.prj
2569KB	NJ_HSPA.shp
1KB	NJ_HSPA.shx

Section 4: Validations and Results

We validated the following data items in the original submission.

Geospatial Data
- Received two shape files (one polygon each) with shapes within the state of New Jersey. See above for initial load of shapefiles onto Arcmap.

Middle Mile Data
- File middle_mile_nj.xls lists 10 connections, with 3 unique endpoints in New Jersey. Ownership, facility capacity, facility type codes are all valid

Speed/Technology Data
- File area_availability.txt provides technology and spectrum codes that are within the valid set
- File avg_speed_nj.xls provides subscriber-weighted nominal speeds, which we will not be using for this round (no overview table required).

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from supplied file “middle_mile_NJ.xlsx” (14 rows, 3 unique points). The following table explains the transformations that were applied.

Table	Data Source / Transformation

Column	
PROVNAME	Set to “T-Mobile USA, Inc."
DBANAME	Set to "T-Mobile"
FRN	Set to “0006945950”
OWNERSHIP	As provided in column Ownership (value 1)l
BHCAPACITY	As provided in column Serving Facility Capacity
BHTYPE	As provided in column Serving Facility Type
LATITUDE	Created by geocoding the supplied address
LONGITUDE	Created by geocoding the supplied address
ELEVFEET	Set to “0” (zero)
STATEABBR	As provided in column State
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Created using ESRI ArcDesktop

Internal notes on processing:

47. Created an excel sheet with the original data and imported to a geodatabase table.
48. Added points corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
49. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the Year 2000 census block shapes from Tiger Line reference data.
50. Reused the source table created in October 2010 by this process.

NTIA Table BB_Service_Wireless

Loaded from the supplied shapefiles “NJ” and “NJ_HSPA”. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "T-Mobile USA, Inc." per area_availability_NJ.txt
DBANAME	Set to “T-Mobile" per area_availability_NJ.txt
FRN	Set to “0006945950”
TRANSTECH	Set to 80 per area_availability_NJ.txt
SPECTRUM	Set to “4” per translation shown below
MAXADDOWN	Set to 4 or 6 according to shapefile (technology), as specified in file area_availability_NJ.txt
MAXADUP	Set to 2 or 4 according to shapefile (technology), as specified in file area_availability_NJ.txt
TYPICDOWN	Set to null (not supplied)
TYPICUP	Set to null (not supplied)
STATEABBR	Set to "NJ”
SHAPE	As supplied.

Internal notes on processing:

18. The supplied shapes use geographic coordinate system name GCS_North_American_1983. The NTIA data model requires coordinate system GCS_WGS_1984. To change the projection we applied the ESRI geographic transformation NAD_1983_To_WGS_1984_5 (per ESRI KB article 24159). We also had to load the data into a feature class such that the tolerance value matches the NTIA transmittal model.
19. Spectrum: NOFA defines 7 spectrum columns. T-Mobile provided a "Y" value in column 4 (Advanced Wireless Services, ranges 1710-1755 MHz; 2100-2155) in file area-availability_NJ.txt, so we coded the value as '4'.
20.

Section 6: Clarification Questions and Responses

1. Submitted shapes bear some - but not exact - resemblance to the "data coverage maps" on tmobile.com (see Figure 2). While the Web maps are not guaranteed to be completely precise it may be worth asking about the differences. E.g., the no coverage region in the Web map seems to be smaller than what we find on the submitted shapefiles.

2. No upstream/downstream 'typical speeds' found.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 04, 2011 1:46 PM
To: 'jeni.wilcox@t-mobile.com'
Cc: 'ConnectingNJ@research.telcordia.com'
Subject: NJBB Clarification questions

Jeni,
We have reviewed the data you submitted to the NJ Broadband mapping program and have a few clarification questions:

5. The shapes file you submitted is similar but not identical, to the the data coverage map that is published at tmobile.com. For example, the region without coverage appears smaller on the Web map than on the submitted shape files. Could you provide an explanation for the differences?
6. The NTIA is encouraging us to request and submit to them typical speeds as experienced by your customers. Are you willing to provide this data?

Thanks for your participation in the program.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Wilcox, Jeni [mailto:Jeni.Wilcox@t-mobile.com]
Sent: Friday, March 04, 2011 2:02 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJBB Clarification questions

Hi John,

Thanks for the email. Please see my responses below in red. Please let me know if you have further questions.

Thanks,
Jeni

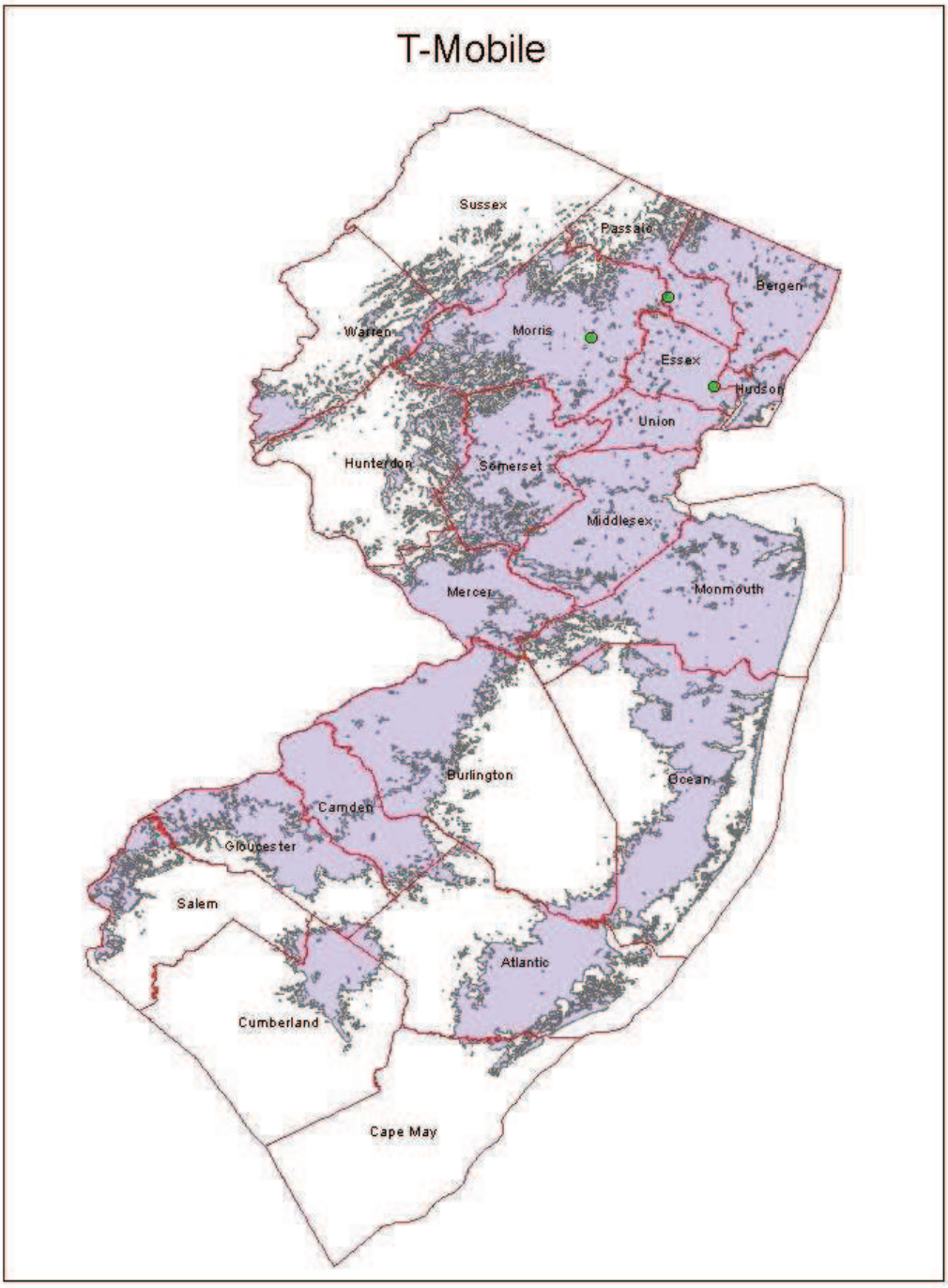
From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 04, 2011 10:46 AM
To: Wilcox, Jeni
Cc: ConnectingNJ@research.telcordia.com
Subject: NJBB Clarification questions

Jeni,
We have reviewed the data you submitted to the NJ Broadband mapping program and have a few clarification questions:

3. The shapes file you submitted is similar but not identical, to the the data coverage map that is published at tmobile.com. For example, the region without coverage appears smaller on the Web map than on the submitted shape files. Could you provide an explanation for the differences? The differences are likely due to the fact that T-Mobile.com displays current coverage and the shapefile I sent to you represent broadband coverage as of 12/31/10.
4. The NTIA is encouraging us to request and submit to them typical speeds as experienced by your customers. Are you willing to provide this data? T-Mobile is not providing typical speed data.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: tw telecom of new jersey l.p.
Received: March, 2011
Submission date: March 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

156. NDA Status
157. Submission Overview
158. Submission File Details
159. Data Validations and Results
160. Data Transformation and Loading
161. Clarification Questions and Provider Responses
162. Notes and Open Issues

Section 1: NDA Status

NONE

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN
Holding company name
Holding company number</td><td>tw telecom of new jersey l.p.
Not provided
0004351417
tw telecom inc.
160153</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Text</td></tr>
<tr><td>File size</td><td colspan="3">3419 bytes, 35 records</td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Address; values 2..11</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Address; values 2..11</td></tr>
</table></td></tr>
</table>

	Subscriber-weighted-up		Not provided	
	Subscriber-weighted-down		Not provided	
Technology Type	30 (Other copper) and 50 (fiber)			
End-user specification	4 (medium – large enterprise)			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: None provided				

Section 3: Submission File Details

Received 1 file by secure upload:

Size	**Name**
3419	NJBB_0004351417_AddressLevelAvailability.txt

The file has 35 records. All are addresses; no apartment/suite/unit numbers are provided. Some addresses are repeated, sometimes with different speed numbers, suggesting that these entries are customer service addresses. Several are the addresses of multi-tenant buildings.

Section 4: Validations and Results

All addresses could be geocoded. All coded values in the tech trans and speed columns are valid.

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead,

we discover the census block for each customer address, then report the census block shape drawn from Census Bureau TigerLine reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file "NJBB_0004351417_AddressLevelAvailability.txt". The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column "Provider Name"
DBANAME	Not supplied; set same as PROVNAME
PROVIDER_TYPE	Set to 1
FRN	As supplied in column "FRN", with leading zeroes
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column Technology of Transmission
MAXADDOWN	For technology 30: Set to 7, the max val in MaxAdDown For technology 50: Set to 11, the max val in MaxAdDown
MAXADUP	For technology 30: Set to 7, the max val in MaxAdDown For technology 50: Set to 11, the max val in MaxAdDown
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

51. Geocoded the addresses using the Google geocoder to obtain a Latitude, Longitude pair for each..
52. Created an excel sheet and imported it to a geodatabase table.
53. Added point shapes corresponding to each Latitude, Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
54. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
55. Discarded 11 rows with duplicate census blocks, which means multiple customers are present in the same census block.

The mechanized procedure for the three steps is described in file GeoExcel_proc.txt.

Section 6: Clarification Questions and Responses

1. Based on the prior interactions with the provider, the following was assumed:

DBNAME	- not supplied; set same as PROVNAME
address level data	- need to obfuscate
middle mile	- none
typical speeds	- not provided

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 08, 2011 8:27 AM
To: 'tammy.chatfield@twtelecom.com'
Cc: ConnectingNJ@research.telcordia.com
Subject: TW Telecom Clarification Questions

Tammy,
We have reviewed the data you submitted to the NJ Broadband data Mapping program and have two clarification questions:

1. During your last submission, you indicated that you did not have any middle mile connection points in NJ. Is that still the case?
2. You provided us with maximum advertised speeds. Would it be possible for you to provide typical speeds experienced by your customers?

Thanks for your participation in the program.

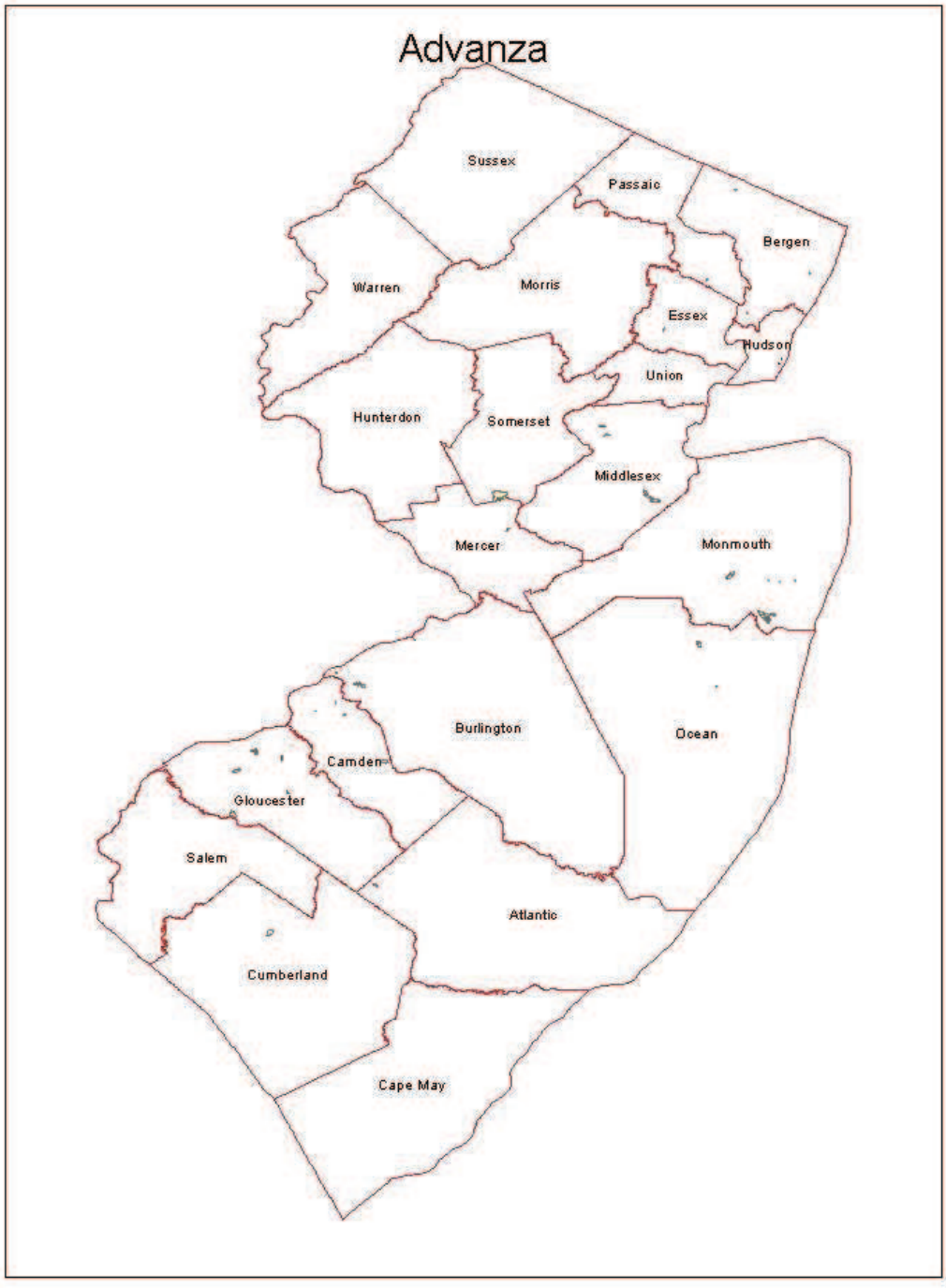
John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Chatfield, Tammy [mailto:Tammy.Chatfield@twtelecom.com]
Sent: Tuesday, March 08, 2011 8:45 AM
To: ConnectingNJ@research.telcordia.com
Subject: RE: TW Telecom Clarification Questions

1. Correct, we do not have any middle mile facilities in NJ.
2. Unfortunately, we do not have any information on typical speeds.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Verizon
Received: September, 2010
Submission date: October 2010

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

163. NDA Status
164. Submission Overview
165. Submission File Details
166. Data Validations and Results
167. Data Transformation and Loading
168. Clarification Questions and Provider Responses
169. Notes and Open Issues

Section 1: NDA Status

Verizon executed an NDA with NJ OIT.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>Must choose one of 7
DBA name(s) not provided
Must choose one of 7</td></tr>
<tr><th colspan="4">FOR WIRELINE</th></tr>
<tr><td>Filetypes</td><td colspan="3">Text and excel</td></tr>
<tr><td>File size</td><td colspan="3">See below</td></tr>
<tr><td>Speeds</td><td colspan="3">
<table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>County (code 7)</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>County (code 9)</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Not provided</td></tr>
</table>
</td></tr>
</table>

	Subscriber-weighted-down		County	
Technology Type	DSL (10) and FTTP (50)			
End-user specification	Not provided (no availability data by address, so not needed)			
Comments: Cover letter lists several business entities. Data file columns for provider, DBA name, FRN are always blank.				
INTERCONNECTION DATA				
ID				
File size	Excel file, 11 riwsm see below			
Ownership	Not provided			
Transport Type	Not provided			
Data Rates/Capacity	Not provided			
Location	Address			
Comments:				

Section 3: Submission File Details

Received these files by CD-ROM (forwarded by NJ OIT, arrived 2 September 2010):

Directory 1_Broadband Service Availability Data by Census Block:

Size	**Name**
584	NJ - Advertised Speed by County.txt
5618170	NJ - Wireline Service By Census Block.txt
136288	NJ - Wireline Service By Street Segment.txt

Directory 2_Residential Broadband Service Pricing and Speed Characteristic:

Size	**Name**
2294	NJ - Pricing.txt

Directory 3_Middle Mile Data:

Size	**Name**
24064	NJ - POP List (as of 6-30-10).xls

Section 4: Validations and Results

We validated the following data items in the original submission.

File “NJ - Advertised Speed by County.txt” (21 rows)

Lists these columns (* indicates no data): Provider Name*, DBA Name*, FRN*, ID, County FIPS Code, County Name, Maximum Advertised Downstream Speed, Maximum Advertised Upstream Speed.

County codes are valid. Speed codes are valid; every county is listed at 9 (down) and 7 (up).

File “NJ - Wireline Service By Census Block.txt” (158,653 rows)

Lists these columns (* indicates no data): ProviderName*, DBAName*, FRN*, ID, 2009 Census Block FIPS Code, 2009 Census Block Square Miles, Technology of Transmission.

All block IDs were matched against Year 2009 Census Bureau TigerLine reference data. Two technology codes are present, 10 and 50, both are valid.

File “NJ - Wireline Service By Street Segment.txt” (1,775 rows)

Lists these columns (* indicates no data): Provider Name*, DBA Name*, FRN*, ID, Census Block FIPS Code, Census Block Square Milage, TLID, Street Name, FRADDL, TOADDL, FRADDR, TOADDR, Technology of Transmission.

All block IDs were matched against Year 2009 Census Bureau TigerLine reference data for blocks 2 sq mi or larger. All TigerLine IDs were matched against the same reference data source. Note that the input set contains 19 records that are duplicates when checked by county (characters 2..5 of Census Block FIPS Code) TLID and TechTrans; the census blocks are different for the records. To avoid duplicates in the target table, these records were discarded.

File “NJ - Pricing.txt” (43 rows)

This file provides subscriber-weighted nominal speeds. The columns are not labeled but appear to be as follows (* indicates no data in any row): Provider_Name, DBA Name*, FRN, County ID (based on odd numbers 1..41), State, Technology of Transmission, Unlabeled*, Subscriber Weighted Nominal Speed.

The county IDs are valid, the state ID (“34”) is valid, and the technology of transmission codes 10, 20, and 50 are all valid. The Subscriber Weighted Nominal Speed values are plausible for the specified technology of transmission codes; e.g., DSL speeds are about 4,000. However, every FIOS speed is shown at 25,000 or higher. Given the availability of FIOS/FTTP plans at download speeds of less than 25Mbps, it seems unlikely that not a single customer uses one of those plans and/or that so many customers use a 50Mbps plan that the average is brought up so high.

File "NJ - POP List (as of 6-30-10).xls" (11 rows)

Column names: Address, City, State, Zip.

We geocoded the addresses to obtain latitude, longitude value pairs. All addresses were found. However, Verizon did not supply needed information on the elevation, ownership, serving facility capacity, and service facility type of these addresses. In June 2010 Verizon indicated they had no intention of supplying this information.

Section 5: Data Transformation and Loading

NTIA Table BB_ConnectionPoint_MiddleMile

Loaded from supplied Excel Spreadsheet "NJ - POP List.xls" (11 rows). The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "Verizon Online LLC""
DBANAME	Set to "Verizon"
FRN	Set to "0012254363"
OWNERSHIP	Set to null
BHCAPACITY	Set to null
BHTYPE	Set to null
LATITUDE	Created by geocoding the supplied address
LONGITUDE	Created by geocoding the supplied address
ELEVFEET	Set to "0" (zero)
STATEABBR	Set to "NJ"
FULLFIPSID	ID of containing census block from Year 2000 Census Bureau TigerLine reference data
SHAPE	Created using ESRI ArcDesktop

Internal notes on processing:

56. Created an excel sheet and imported to a geodatabase table.
57. Added points corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
58. Added a column containing the ID of the containing year 2000 census block via a spatial join of the points and the census block shapes from reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied text file "NJ - Wireline Service By Census Block.txt" (158,653 rows). The following table explains the transformations that were applied to load the

target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Verizon Online LLC”
DBANAME	Set to “Verizon”
RESELLER	Set to “N”
FRN	Set to “0012254363”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from 2009_Census_Block_FIPS_Code (1st 3 digits)
TRACT	Populated from 2009_Census_Block_FIPS_Code (next 6 digits)
BLOCKID	Populated from Census_Block_FIPS_Code (next 4 digits; dropped 5th character if present)
BLOCKSUBGROUP	Set to null
FULLFIPSID	First 15 digits of 2009_Census_Block_FIPS_Code See discussion of Census blocks below.
TRANSTECH	As supplied in column Technology_of_Transmission
MAXADDOWN	Set to 6 or 9, see below.
MAXADUP	Set to 3 or 7; see below
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau TigerLine 2000, As matched by Census block 2000 ID

Internal processing notes:

3. Census Blocks: Verizon supplied Census 2009 block IDs (15 or 16 characters). The NTIA directed us to supply data using Census 2000 blocks for the October 2010 data submissions, including the shapes. We transformed the data as follows. The vast majority of 2000 versus 2009 blocks are identical; most of the blocks newly added in the Census 2009 data were formed by splitting Census 2000 bocks into smaller pieces. We show service available in a Census 2000 block if any Census 2009 block that has the Census 2000 block ID as a proper prefix has service available. Of the original data, 141,002 rows required no changes; 17,651 rows have Census 2009 blocks with IDs that are a proper prefix of 2000 blocks IDs; no other cases were found. Altering the rows with Census 2009 block information meant discarding 7,335 duplicate rows (i.e., split blocks). Some of the resulting year-2000 blocks are large. We cannot report large blocks in this table. Instead, we reported the same availability by street segment for all streets in those large blocks by joining against the Census Bureau Tiger Line 2009 data set.
4. Speeds: We imputed max advertised up and down speeds based on the technology of transmission, the contents of the File “NJ - Advertised Speed by County.txt”, and information on the Verizon web site. Mad adv down for tech code 10 (DSL) is speed code 6, and max adv down for tech code 50 (FIOS) is speed code 9. Max adv up for tech code 10 (DSL) is speed code 3, and max adv up for tech code 50 (FIOS) is speed code 7.

NTIA Table BB_Service_Overview

Loaded from the supplied file "NJ - Pricing.txt" (43 rows). The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Verizon Online LLC"
DBANAME	Set to "Verizon"
FRN	Set to "0012254363"
GEOUNITTYPE	Set to "CO" (county) per NTIA requirement
STATECOUNTYFIPS	As supplied in column Census Block County ID; padded with leading zeros to length 3 and prefixed with "34"
TRANSTECH	As supplied in column Technology_of_Transmission
MAXADDOWN	Set to 6 or 9, see below.
MAXADUP	Set to 3 or 7; see below
ARPU	Set to null
SWNOMSPEED	As supplied in column Subscriber_Weighted_Nominal_Speed
STATEABBR	Set to "NJ"
SHAPE	Copied from Year 2000 Census Bureau TigerLine reference data, as matched by StateCountyFIPS

Internal notes on processing

1. Speeds: : We imputed max advertised up and down speeds based on the technology of transmission, the contents of the File "NJ - Advertised Speed by County.txt", and information on the Verizon web site. Max adv up for tech code 10 (DSL) is speed code 3, and max adv up for tech code 50 (FIOS) is speed code 7. Mad adv down for tech code 10 (DSL) is speed code 7, and max adv down for tech code 50 (FIOS) is speed code 9.

NTIA Table BB_Service_RoadSegment

Loaded from supplied text file "NJ - Wireline Service By Street Segment.txt" (1,775 rows). The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Verizon Online LLC"
DBANAME	Set to "Verizon"
RESELLER	Set to "N"
FRN	Set to "0012254363"
ADDMIN	Set to the least of the non-empty address numbers
ADDMAX	Set to the greatest of the non-empty address numbers
PREDIR	Set to null (no value supplied)
STREETNAME	As supplied (has all street components, not just name)
STREETTYPE	Set to null (no value supplied)
SUFFDIR	Set to null (no value supplied)

CITY	Set to null (no value supplied)
STATECODE	Set to “NJ”
ZIP5	(no value supplied)
ZIP4	(no value supplied)
TRANSTECH	As supplied
MAXADDOWN	Set to 6 or 9, see below.
MAXADUP	Set to 3 or 7; see below
TYPICDOWN	(no value supplied)
TYPICUP	(no value supplied)
SHAPE	Copied from Census Bureau TigerLine 2009, As matched by County + Tiger Line ID

Internal notes on processing:

1. We discarded 6 input rows that associate line segments with incorrect census blocks. This mistaken associations are

TLID	CBID
134039790	340057038015000A
134097546	340057038015000A
60466031	340270444019024C
203769459	340297360021005A
65273600	340312568031000A
98114892	340410318002013

   See the appendix to this document for full details.
2. All but one row were supplemented with a line-segment shape from the Census Bureau’s TigerLine data set.
3. Speeds: : We imputed max advertised up and down speeds based on the technology of transmission, the contents of the File “NJ - Advertised Speed by County.txt”, and information on the Verizon web site. Max adv up for tech code 10 (DSL) is speed code 3, and max adv up for tech code 50 (FIOS) is speed code 7. Mad adv down for tech code 10 (DSL) is speed code 7, and max adv down for tech code 50 (FIOS) is speed code 9.
4. Some entries originate from streets within large blocks that we found when changing from Year 2009 to Year 2000 Census Block geography, see discussion of table BB_Service_Censusblock above.

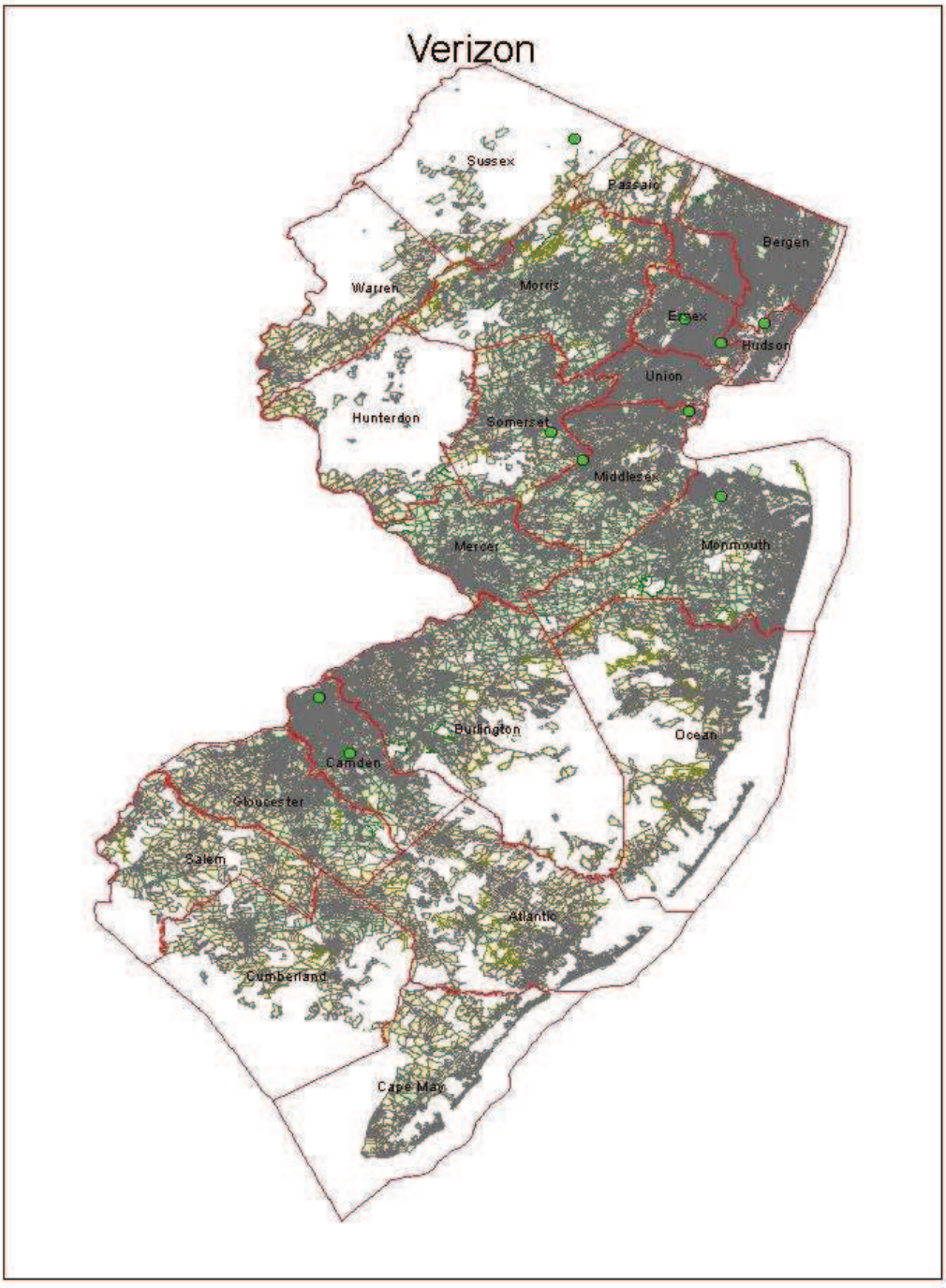
Section 6: Clarification Questions and Responses

1. Most data file rows have no entry for provider name, DBA name, and FRN. The cover letter includes a list of seven Verizon business units, showing their provider names, FRNs, and (some) DBA names. We propose to submit the same information as in June 2010: provider name is “Verizon Online LLC”, DBA name is “Verizon”, and FRN is 0012254363.

2. The NTIA has repeatedly urged us to request and transmit to them speed data at the census block and line segment level. The latest submission from Verizon provides maximum advertised speeds at the county level, which was a very welcome change compared to the previous submission where speed data was shown at the CMA level, however the numbers are the same for all counties. The latest submission does not provide typical speeds at any geographic resolution. Please consider providing this information.
3. We were very glad to see TigerLine ID data in the street segment data file. It would be a great help if the street addresses were provided with the components split into the fields expected by the NTIA, which are PREDIR, STREETNAME., STREETTYPE, and SUFFDIR. We would also like to receive CITY, ZIP5, and ZIP4 for each row.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Voxitas
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

170. NDA Status
171. Submission Overview
172. Submission File Details
173. Data Validations and Results
174. Data Transformation and Loading
175. Clarification Questions and Provider Responses
176. Notes and Open Issues

Section 1: NDA Status

Executed.

Section 2: Submission Overview

<table>
<tr><td colspan="4">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN
Holding company name
Holding company number</td><td>Netlogic, Inc.
Voxitas
0006825954
Netlogic, Inc.
130896</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3">CSV file</td></tr>
<tr><td>File size</td><td colspan="3">389 bytes, 4 data rows</td></tr>
<tr><td>Speeds</td><td colspan="2"><table>
<tr><th>Type</th><th></th><th>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</th></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>Not provided</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>Not provided</td></tr>
</table></td><td>Address rows with provisioned speed entries were provided.</td></tr>
</table>

	Subscriber-weighted-up		Not provided	
	Subscriber-weighted-down		Not provided	
Technology Type	Not provided; confirmed to be copper (prior interactions). Will use - other ("DS1")			
End-user specification	Not provided			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: Not provided				

Section 3: Submission File Details

Received 1 file by secure upload.

Size	Name
389	NJBroadband.csv

The file has 4 (four) rows of data, no column names provided. All have provider's info, customer names and addresses and also speeds. Provider agreed (prior interactions) for the address level data to be submitted to the NTIA. All entries describe DS1 service (established through prior interactions). Speeds listed are the provisioned speeds, not typical or advertised. No coded representations of data such as end user type, technology of transmission, etc. are provided.

Section 4: Validations and Results

No codes etc. were provided; the only possible validations are to check the addresses, and all four appear valid (actually, only two different addresses are provided).

Section 5: Data Transformation and Loading

The standard NDA prohibits us from submitting address-level data to the NTIA. Instead, we discover the census block for each customer address, then report the census block shape drawn from Year 2000 Census Bureau reference data.

NTIA Table BB_Service_CensusBlock

Loaded from supplied file "NJ Broadband.csv". The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to "Netlogic, Inc."
DBANAME	Set to "Voxitas"
RESELLER	Set to "N"
FRN	Set to "0006825954"
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	Set to "30"
MAXADDOWN	Set to 3 per input
MAXADUP	Set to 3 per input
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000, as matched by spatial join on geocoded address

Internal processing notes:

59. Geocoded the addresses using the Google geocoder.
60. Created an excel sheet and imported to a geodatabase table.
61. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog's "Create Feature Class from XY Table" option.
62. Added a column containing the ID of the containing year 2000 census block via a spatial join of the point shapes and the census block shapes from reference data.
63. Discarded NN rows with duplicate census blocks.

The mechanized procedure for the geocoding steps is described in file GeoExcel_proc.txt.

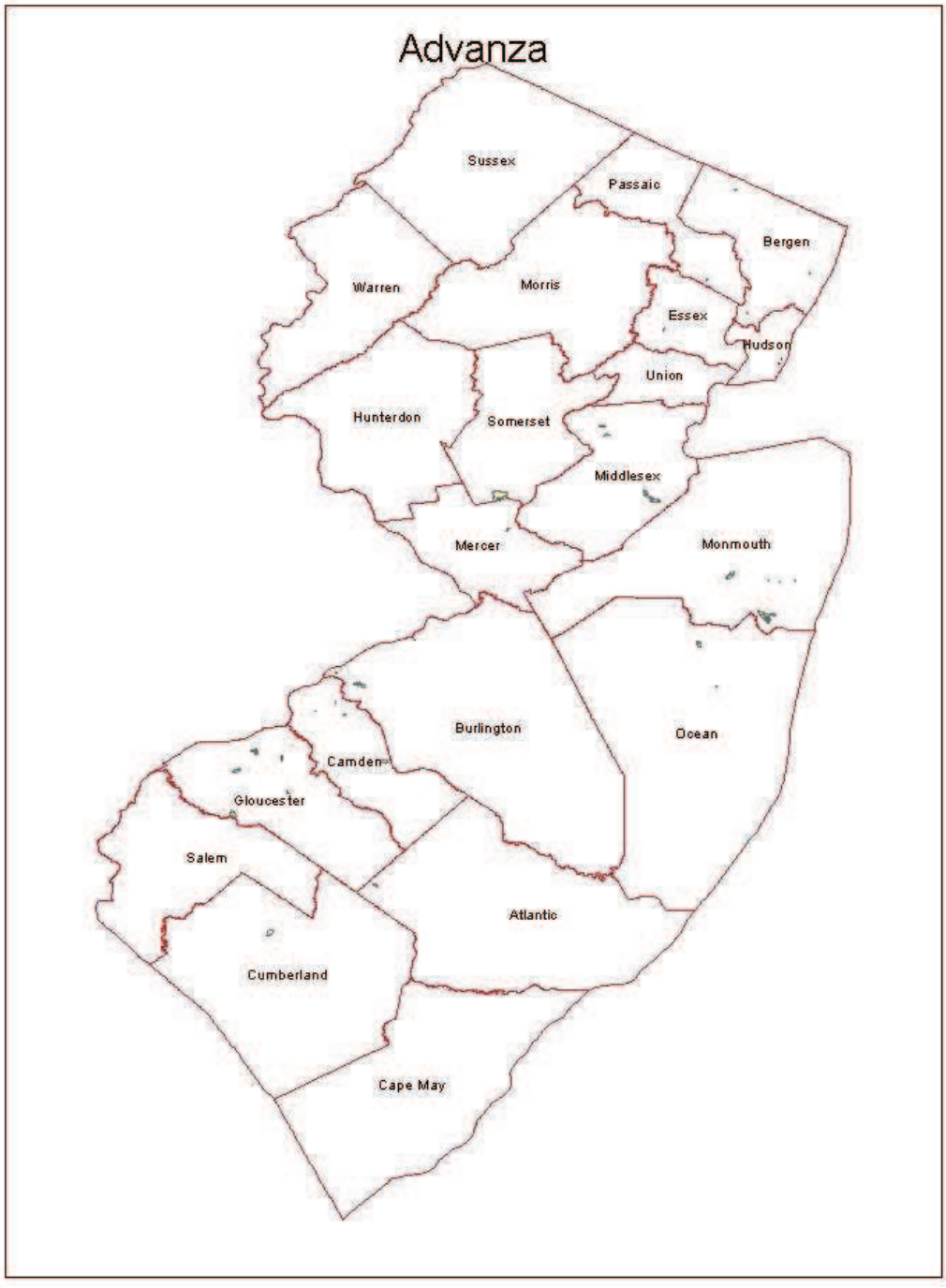
Section 6: Clarification Questions and Responses

1. Since no column names were included, based on the data itself and prior interactions with the provider, we interpret the columns (1 – 17) to be:
   - Provider Name
   - DBA
   - FRN
   - End User Address (columns 4 – 11)
   - User Category
   - Technology of Transmission
   - Max. Adv. Down Speed
   - Max. Adv. Up Speed
   - Typ. Down Speed
   - Typ. Up Speed

   We probably do not need to confirm that.

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Verizon Wireless
Received: January, 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

177. NDA Status
178. Submission Overview
179. Submission File Details
180. Data Validations and Results
181. Data Transformation and Loading
182. Clarification Questions and Provider Responses
183. Notes and Open Issues

Section 1: NDA Status

NDA was executed.

Section 2: Submission Overview

<table>
<tr><th colspan="4">AVAILABILITY DATA</th></tr>
<tr><td rowspan="5">ID</td><td colspan="2">Provider name</td><td>Cellco Partnership</td></tr>
<tr><td colspan="2">“Doing business as” name</td><td>Verizon Wireless</td></tr>
<tr><td colspan="2">FRN</td><td>0003290673</td></tr>
<tr><td colspan="2">Holding company name</td><td>Verizon Communications Inc.</td></tr>
<tr><td colspan="2">Holding company number</td><td>131425</td></tr>
<tr><th colspan="4">FOR WIRELESS</th></tr>
<tr><td>Filetypes</td><td colspan="2">shapefile collection: shp/dbf/prj/shx, mdb, gdb, imagefile etc.</td><td>Supplied 2 shapfiles (zip archive) with 119 and 13 rows. Shapefiles use projection GCS_WGS_1984..</td></tr>
<tr><td rowspan="5">Speeds</td><td>Type</td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)</td><td>Provided speeds apply to the first set of polygons.</td></tr>
<tr><td>Upstream max adv</td><td>1.8 mbps</td><td></td></tr>
<tr><td>Downstream max adv</td><td>3.1 mbps</td><td></td></tr>
<tr><td>Upstream typical</td><td>500k-800kbps</td><td rowspan="2">Ranges provided instead of single values. Lower end of the Down Typical range is OUTSIDE of the Broadband speed definition (will use upper end values for the time</td></tr>
<tr><td>Downstream</td><td>600kpbs-1.4mbps</td></tr>
</table>

	typical		being).
	Subscriber-weighted	Not provided	
Speeds	Type	Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode)	Provided speeds apply to the second set of polygons.
	Upstream max adv	1.8 mbps * 10 times	
	Downstream max adv	3.1 mbps * 10 times	
	Upstream typical	2mbps -5mbps	Ranges provided instead of single values. Lower end of the Down Typical range is OUTSIDE of the Broadband speed definition (will use upper end values for the time being).
	Downstream typical	5mbps -12mbps	
	Subscriber-weighted	Not provided	
Technology Type	Spectrum (Mhz, FCC code)		Code 80 [Cellular (824-849Mhz, 869-894 Mhz); PCS 1850-1990 Mhz; AWS (1710-1755Mhz, 2110-2155Mhz); 700 (757-758Mhz, 776-779Mhz, 787-788Mhz, 805-806Mhz)] One of the provided Spectrum 1 ranges is 869-894 Mhz, which is not within ranges defined for that spectrum The shapefile is named “EVDO_NJ” suggesting that the availability is only for EVDO. Verizon Wireless documents on the web suggest the company uses spectrum 850 MHz and 1900 MHz for their EVDO.
Comments:			
INTERCONNECTION DATA			
ID			
File size			
Ownership			
Transport Type			
Data Rates/Capacity			
Location			
Comments:			

Section 3: Submission File Details

All data was supplied by email.

Received overview file " Broadband Verizon Wireless' wireless broadband statistics.doc" with spectrum and speed information.

Received 2 shapefiles with the following contents. The EVDO_NJ shape has 119 polygons, and the VZW_LTE_NJ shape has 13 polygons.

Size	Name
42091	EVDO_NJ.dbf
145	EVDO_NJ.prj
720796	EVDO_NJ.shp
13156	EVDO_NJ.shp.xml
1052	EVDO_NJ.shx

Size	Name
2358	VZW_LTE_NJ.dbf
145	VZW_LTE _NJ.prj
144312	VZW_LTE _NJ.shp
51461	VZW_LTE _NJ.shp.xml
204	VZW_LTE _NJ.shx

No cover letter was included. We reused information provided in the June 2010 cover letter (stored as Broadband Verizon Wireless' wireless broadband statistics.doc)

Section 4: Validations and Results

We validated the following data items in the original submission.

Geospatial Data: Verizon Wireless provided two shape file with polygons.

Shape file EVDO_NJ: The total shape apparently covers the entire state of New Jersey. Some differences are visible along the water body edges. There are duplicate shapes in this shapefile.

Shape file VZW_LTE_NJ: The shape covers portions of central-Northern New Jersey; the NJ Turnpike appears to be covered for its entire length.

Middle-mile Data (e.g., interconnection points) was NOT provided.

Overview Data (e.g., Cellular Market Area, Subscriber-Weighted Nominal Speed) was NOT provided.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_Wireless

Loaded from the supplied shapefiles. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	As supplied in Word document
DBANAME	As supplied in Word document
FRN	Set to "0003290673"
TRANSTECH	Set to 80 per Word document
SPECTRUM	EVDO_NJ: Set to “3” per translation shown below VZW_LTE_NJ: Set to "2"
MAXADDOWN	EVDO_NJ: Set to “5”, see below. VZW_LTE_NJ: Set to "6" per email clarification
MAXADUP	EVDO_NJ: Set to “4”, see below. VZW_LTE_NJ: Set to "5" per email clarification
TYPICDOWN	Set to null
TYPICUP	Set to null
STATEABBR	Set to “NJ”
SHAPE	As supplied.

Internal notes on processing:

21. The supplied shape uses geographic coordinate system name GCS_WGS_1984 The NTIA data model requires the same coordinate system. No geographic transformation was required, but the XY Tolerance values differ if the shapefile is imported trivially into the geodatabase. Imported the table schema and the table data in two separate operations, thereby ensuring perfect compatibility with the NTIA data model.
22. We identified duplicate shapes in the EVDO feature class using the ESRI "Find Identical" feature, and removed them using the ESRI "Delete Identical" feature. That tool removed 23 rows of data. We found no duplicate shapes in the LTE feature class.
23. Spectrum:
    a. EVDO_NJ: Verizon Wireless provided a statement in their cover letter about their licensed spectrum. Searching on the web indicates that EV-DO uses frequencies 850MHz and 1900Mhz. The NTIA data model has a single column for spectrum. No mapping is provided for frequency 850MHz. Frequency 1900MHz corresponds to NTIA “SPECTRUM USED” code value 3.
    b. VZW_LTE_NJ: Verizon wireless web site advertises "nationwide

contiguous 700 Mhz 4G spectrum. The NTIA coding table provides value 2 for 700Mhz spectrum.

24. Speeds:
    a. EVDO_NJ: The maximum advertised speeds provided in the cover letter are 3.1Mbps down and 1.8Mbps up. The typical speeds are provided as ranges: 600K to 1.4Mbps down and 500Kbps-800Kpbs up. For max adv speeds we encoded the submitted 3.1Mbps down speed as value 5 (range 3-6Mbps) and encoded the submitted 1.8Mbps up speed as value 4 (range 1.5-3Mbps). For typical speeds we encoded the down speed as 3 (range 768Kbps-1.5Mbps) and the up speed as 2 (range 200-768Kbps).
    b. VZW_LTE_NU: The supplied Word document suggests speeds are "10 times EVDO". Per email clarification (see end of document) we will use downstream speed code 6 and upstream speed code 5.
25. The only data imputed was the state abbreviation.

Section 6: Clarification Questions and Responses

There are duplicate shapes in EVDO. Shapes with the same area and length are likely duplicate.

The document states " With Verizon 4G LTE, customers will experience speeds up to 10 times faster than with Verizon's 3G. "

Since 3G's Max Advertised Down is 3.1 Mbps and Max Advertised Up is1.8 Mbps, is it OK to translate to 31 Mbps and 18 Mbps.

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Thursday, March 03, 2011 7:22 AM
To: Malnati, Francis D
Cc: ConnectingNJ@research.telcordia.com
Subject: NJBB Clarifications

Francis,

We have reviewed the NJ Broadband access data submitted by Verizon Wireless and have identified a few issues that we need some clarification on.

1. Within the set of geo-spatial shapes submitted for Verizon Wireless EVDO coverage, there are multiple shapes that are duplicates of one another. NTIA has added a validation rule to eliminate such duplicate shapes. Is there some distinction between these duplicates that we should know about? Is it acceptable for us to remove the duplicates prior to submission.
2. The document states " With Verizon 4G LTE, customers will experience speeds up to 10 times faster than with Verizon's 3G." Based on the 3G Maximum Advertised Downstream speed of 3.1 Mbps and the Maximum Advertised Upstream speed of 1.8 Mbps, this translates to 31 Mbps and 18 Mbps. This would correspond to a downstream speed tier of 8 and an upstream speed tier of 7. Is this a correct interpretation?

If you need further information or clarification on these questions, please contact me. We appreciate your prompt attention.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Malnati, Francis D [mailto:Francis.Malnati@VerizonWireless.com]
Sent: Thursday, March 03, 2011 10:27 AM
To: ConnectingNJ@research.telcordia.com
Cc: Malnati, Francis D
Subject: RE: NJBB Clarifications

John

1. We reported that we're licensed by the FCC to operate on 4 spectrum bands – 3 to provide our 3G wireless broadband service and 1 (700Mhz) for 4G LTE. As to our 3G service we make no distinction between the service coverage area for each of the spectrum bands. It would b appropriate to remove the duplicates.
2. Here's what we tell the public about 4G speeds on our website: "Verizon's 4G LTE network delivers an average throughput of 5-12 megabytes per second (Mbps) downlink and 2-5 Mbps uplink."

Hope this helps. If you'd like to speak please e-mail me or call me on my mobile.
Fran

Fran Malnati
Executive Director - Regulatory Matters
Mobile: 201-819-6262

Verizon Wireless
Legal & External Affairs Department
One Verizon Way, VC52S490
Basking Ridge, NJ 07920-1097

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Thursday, March 03, 2011 10:47 AM
To: 'Malnati, Francis D'
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: NJBB Clarifications

Fran,
Thanks for the quick response.
Your advertised rates span the boundaries that define the NTIA tiers. I propose that we will use the tiers that include the mid-point of your advertised ranges. Based on that, we would use tier 6 for downstream (Greater than or equal to 6 mbps and less than 10 mbps) and tier 5 for upstream (Greater than or equal to 3 mbps and less than 6 mbps). That seems to maximize the overlap. Is that acceptable to you?

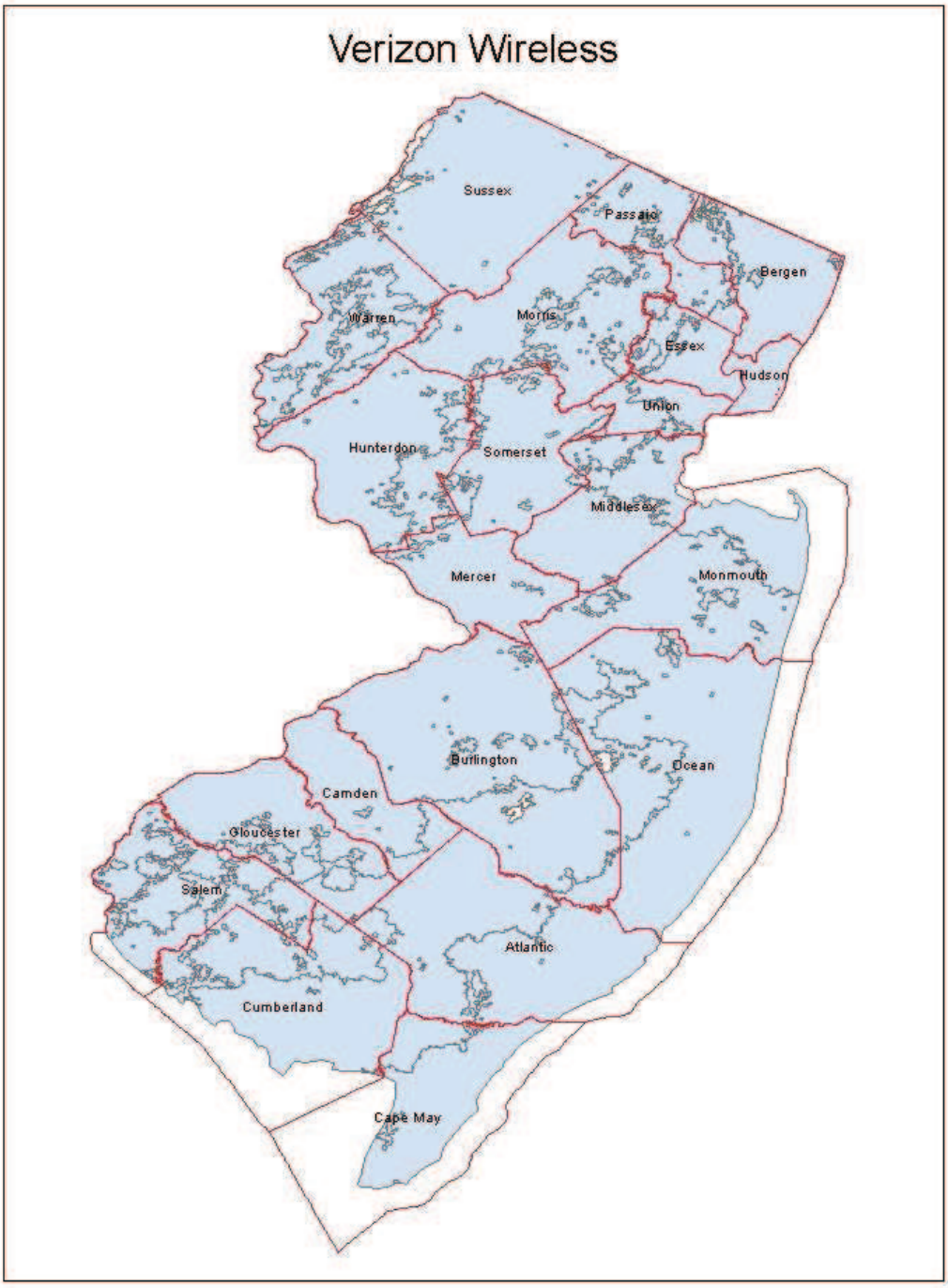
John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Malnati, Francis D [mailto:Francis.Malnati@VerizonWireless.com]
Sent: Thursday, March 03, 2011 11:48 AM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJBB Clarifications

Sure, not an exact science and we hope to continue to improve. Fran

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Wave2Wave Communications, Inc.
Received: March, 2011
Submission date: March, 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

184. NDA Status
185. Submission Overview
186. Submission File Details
187. Data Validations and Results
188. Data Transformation and Loading
189. Clarification Questions and Provider Responses
190. Notes and Open Issues

Section 1: NDA Status

NDA executed with NJ OIT.

Section 2: Submission Overview

AVAILABILITY DATA		
ID	Provider name “Doing business as” name FRN	Wave2Wave Communications, Inc. Wave2Wave Communications 0015329394
FOR WIRELINE		
Filetypes	XLS	
File size	229 rows	

Speeds

Type		Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)
Typical-upstream		Address
Typical-downstream		Address
Advertised-upstream		Address
Advertised-downstream		Address
Subscriber-weighted-		Not provided

	up			
	Subscriber-weighted-down		Not provided	
Technology Type	30 (other copper - probably Ethernet) and 70 (Terrestrial Fixed Wireless)			
End-user specification	Codes 3 and 4			
Comments:				
INTERCONNECTION DATA				
ID	None provided			
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments:				

Section 3: Submission File Details

Received 1 file by SECURE UPLOAD:

Size	Name
76800	NJBB_0015329394_AddressLevelAvailability_03.08.2011.xls

Section 4: Validations and Results

The submitted file has 229 rows with street addresses, tech transmission, max adv speeds, and typical speeds. The codes look reasonable, but the high variety in maximum advertised speeds should be corrected. Of the original rows, 223 could be geocoded successfully and 6 could not. The input address set yielded 163 unique census blocks.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_CensusBlock

Loaded from supplied XLS file. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “ProvName”
DBANAME	As supplied in column “DBAName”
PROVIDER_TYPE	Set to 1
FRN	As supplied in column “FRN”
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)
BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	As supplied in column TransTech
MAXADDOWN	As supplied in column MaxAdvDown
MAXADUP	As supplied in column MaxAdvUp
TYPICDOWN	Set to null
TYPICUP	Set to null
SHAPE	Copied from Census Bureau 2000 reference data, as matched by spatial join on geocoded address

Internal processing notes:

53. Geocoded the addresses using the Google geocoder.
54. Created an excel sheet and imported to a geodatabase table.
55. Added point shapes corresponding to each Latitude,Longitude pair by creating a feature class from the table using ArcCatalog’s “Create Feature Class from XY Table” option.
56. Added a column containing the ID of the containing year 2000 census via a spatial join of the point shapes and the census block shapes from reference data.
57. Copied the Census Block shape from reference data.
58. Discarded 60 rows with duplicate census blocks, leaving 63 for technology 30.

NTIA Table BB_Service_Wireless

Loaded using census block shapes from reference data for the records with transmission technology 70. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column “ProvName”
DBANAME	As supplied in column “DBAName”
FRN	As supplied in column “FRN”
TRANSTECH	As supplied

SPECTRUM	Set to 6, Unlicensed
MAXADDOWN	Set to 10, the largest value submitted for this tech
MAXADUP	Set to 10, the largest value submitted for this tech
TYPICDOWN	Set to null
TYPICUP	Set to null
STATEABBR	Set to “NJ”
SHAPE	Year 2000 Census Block shape obtained from reference data.

Internal processing notes:

26. See above for discussion of geocoding addresses and finding the containing census block.
27. Spectrum: Imputed the code for unlicensed spectrum.

Section 6: Clarification Questions and Responses

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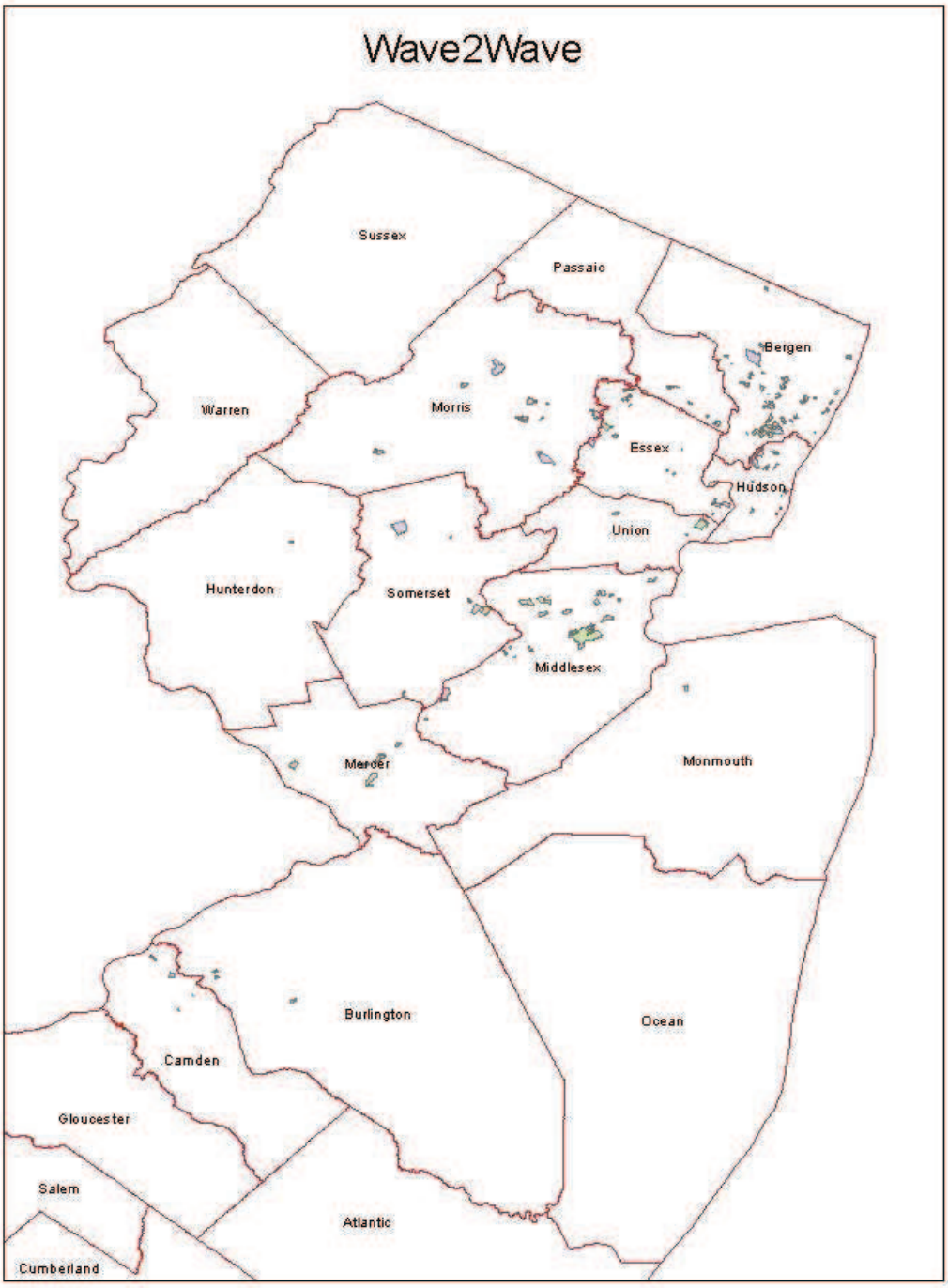
Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: WildBlue Communications Inc.
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

191. NDA Status
192. Submission Overview
193. Submission File Details
194. Data Validations and Results
195. Data Transformation and Loading
196. Clarification Questions and Provider Responses
197. Notes and Open Issues

Section 1: NDA Status

NONE

Section 2: Submission Overview

<table>
<tr><th colspan="5">AVAILABILITY DATA</th></tr>
<tr><td>ID</td><td colspan="3">Provider name
“Doing business as” name
FRN</td><td>WildBlue Communications, Inc.
WildBlue
0007843766</td></tr>
<tr><th colspan="5">FOR WIRELESS</th></tr>
<tr><td>Filetypes</td><td colspan="4">text file, shape file</td></tr>
<tr><td>File size</td><td colspan="4"></td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>Not provided (‘0’)</td></tr>
<tr><td>Typical-downstream</td><td></td><td>Not provided (‘0’)</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>yes. Entire state.</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>yes. Entire state</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Not provided?</td></tr>
</table></td><td>Submitted shape file describing the entire state of NJ with attributes for</td></tr>
</table>

	Subscriber-weighted-down		By county	
Technology Type	Code 60 (Satellite)			
End-user specification	Voice message indicated that the referenced plans are consumer-focused.			

Comments: From the provider's input package:

"The subscriber-weighted nominal speed information has been calculated using only the service tiers that meet the NTIA definition of broadband speed, and is based on subscriber data for active subscribers as of March 17, 2011

WildBlue notes that of the possible 'Spectrum Used' options provided, none listed Ka-Band as an option for Satellite Providers. WildBlue uses Ka-Band spectrum (uplink in the 29.5 – 30 gigahertz band and downlink in the 19.7 – 20.2 gigahertz band). WildBlue has not provided Typical Upstream Speed and Typical Downstream Speed values. WildBlue does not track speeds on a state-by-state basis, but instead primarily monitors overall network speeds. WildBlue has begun the process of recording more granular data relating to the speeds normally experienced by subscribers on a spot-beam basis. WildBlue believes that it will be able to provide this data in the coming months.

The map and supporting data are for one singular service area polygon that equals the entire State of New Jersey. The WildBlue service data values provided do not vary across any county or region within the state; therefore, there is only one service area polygon, namely the entire State of New Jersey

INTERCONNECTION DATA: NONE	
ID	
File size	
Ownership	
Transport Type	
Data Rates/Capacity	
Location	

Comments: Not provided

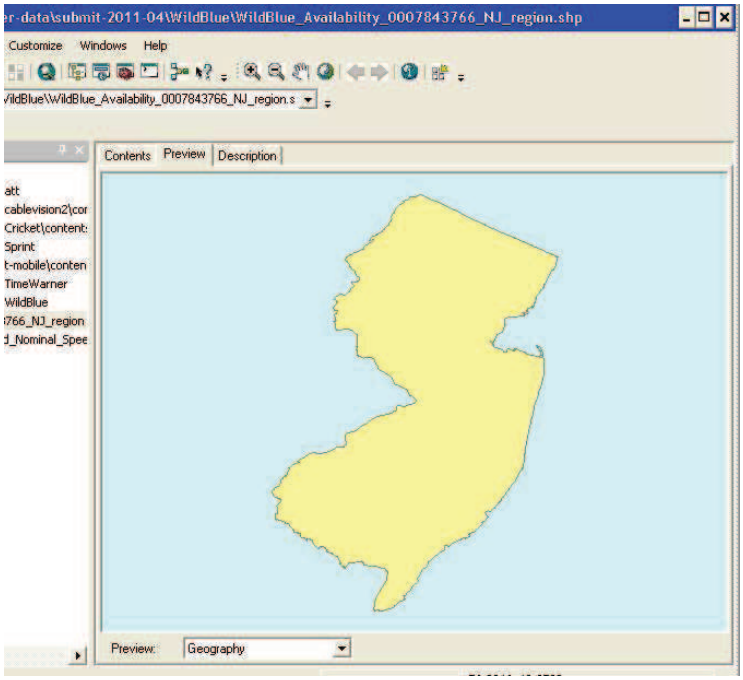


Figure 1. The shape submitted by the provider (the entire state of NJ)

Section 3: Submission File Details

Size (kb)	Name
2	WildBlue_Subscriber_Weighted_Nominal_speed_By_County_NJ.txt
1	WildBlue_Availability_0007843766_NJ_region.shx
1	WildBlue_Availability_0007843766_NJ_region.dbf
1	WildBlue_Availability_0007843766_NJ_region.prj
19	WildBlue_Availability_0007843766_NJ_region.shp

Section 4: Validations and Results

Section 5: Data Transformation and Loading

Loaded county shapes from reference data for counties in the State of New Jersey based on emailed statements that all counties are covered. The following table explains the transformations that were applied.

Table Column	Data Source / Transformation
PROVNAME	Set to "WildBlue Communications, Inc."
DBANAME	Set to "WildBlue"
FRN	Set to 0007843766
TRANSTECH	Set to 60
SPECTRUM	Set to 7 per translation shown below

MAXADDOWN	Set to 4, see below.
MAXADUP	Set to 2, see below.
TYPICDOWN	Not provided, set to null
TYPICUP	Not provided, set to null
STATEABBR	Set to “NJ”
SHAPE	County shape read from reference data.

Internal notes on processing:

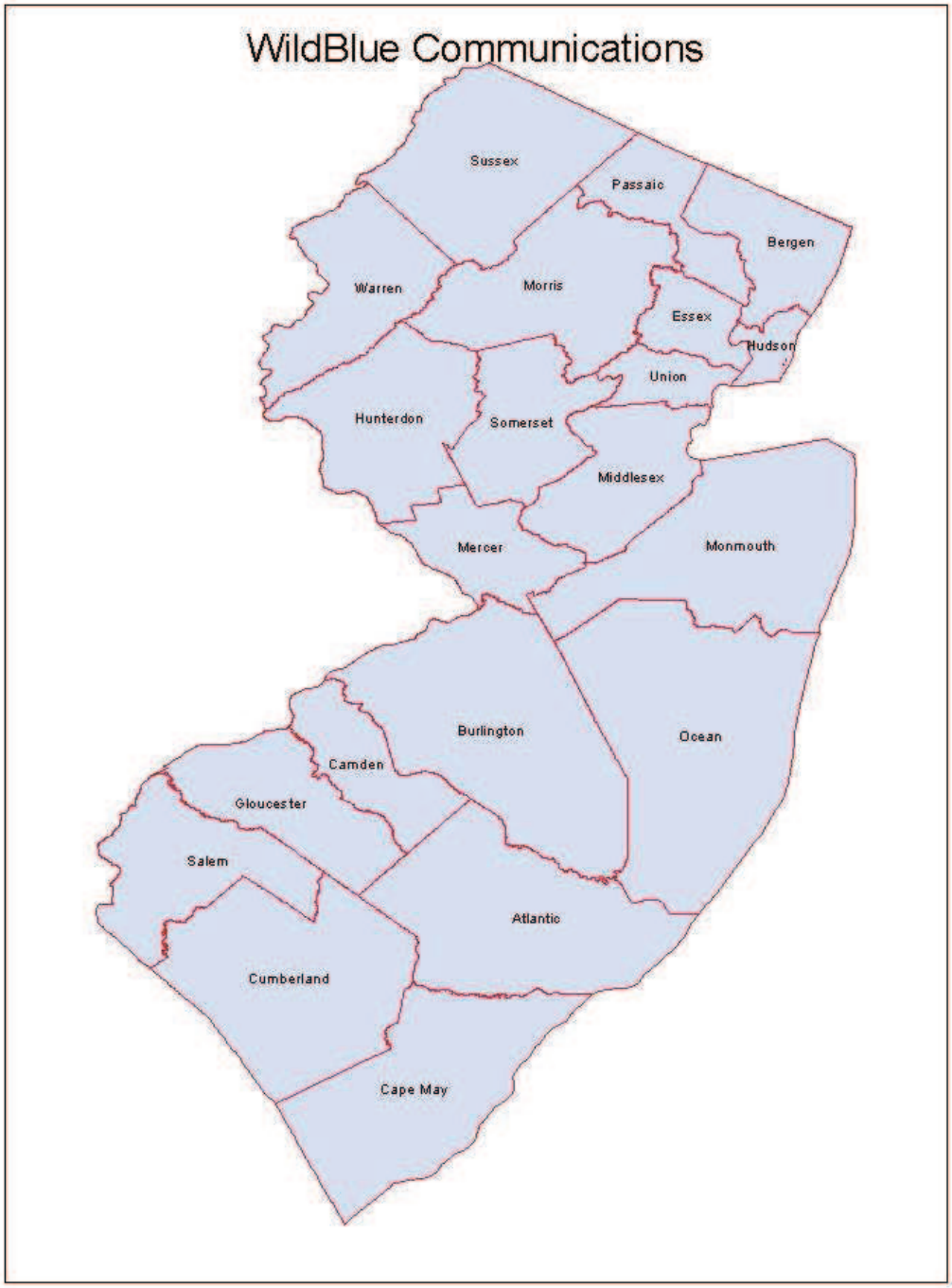
28. Spectrum: No statement was provided. The NTIA data model has a single column for spectrum. Satellite corresponds to NTIA “SPECTRUM USED” code value 7.
29. Speeds: The maximum advertised speeds provided in the emailed brochure are as discussed above For max adv speeds we encoded the submitted down speed as value 4 (range 1.5-3 Mbps) and encoded the submitted up speed as value 2 (range 200 Kbps -- 768 Kbps).
30. Did not use the supplied shapefile because it was faster to copy over reference data that's already in the right XY coordinate system and tolerance value.

Section 6: Clarification Questions and Responses

1. coverage info not supplied at resolution finer than entire state

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Broadband Provider Data Report

Provider: Xchange Telecom
Received: March 2011
Submission date: April 2011

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

198. NDA Status
199. Submission Overview
200. Submission File Details
201. Data Validations and Results
202. Data Transformation and Loading
203. Clarification Questions and Provider Responses
204. Notes and Open Issues

Section 1: NDA Status

None so far

Section 2: Submission Overview

<table>
<tr><td colspan="5">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td colspan="2">Xchange Telecom Corp
Xchange Telecom
0006831713</td></tr>
<tr><td colspan="5">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="4"></td></tr>
<tr><td>File size</td><td colspan="4"></td></tr>
<tr><td rowspan="6">Speeds</td><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td><td rowspan="6">Information provided via email exchange (see below).

Provider originally indicated that their coverage was limited to the area supported by a single central office. In further exchanges, the provider indicated that their coverage is limited to city of Lakewood and that they cover the entire city limits.</td></tr>
<tr><td>Typical-upstream</td><td></td><td></td></tr>
<tr><td>Typical-downstream</td><td></td><td></td></tr>
<tr><td>Advertised-upstream</td><td></td><td>2 Mbps (code 4)</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>10 Mbps (code 7)</td></tr>
<tr><td>Subscriber-weighted-nominal speed</td><td></td><td></td></tr>
</table>

Technology Type	ADSL (code 10)
End-user specification	In response to inquiry, provider reported residential and small business.
Comments:	
INTERCONNECTION DATA	
ID	
File size	
Ownership	
Transport Type	
Data Rates/Capacity	
Location	
Comments:	

Section 3: Submission File Details

Received no file submission, only statements by email.

Section 4: Validations and Results

No data was submitted, so no validation was required.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_CensusBlock

Loaded based on the emailed statement of service to all of Lakewood Township, Ocean county, New Jersey. We submitted all census blocks less than 2 square miles in this municipality. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	Set to “Xchange Telecom Corp” per email response
DBANAME	Set to “Xchange Telecom”
PROVIDER_TYPE	Set to 1
FRN	Set to “0006831713” per email response
STATEFIPS	Set to “34” (NJ)
COUNTYFIPS	Populated from Census Block FIPS Code (first 3 digits)
TRACT	Populated from Census Block FIPS Code (next 6 digits)

BLOCKID	Populated from Census Block FIPS Code
BLOCKSUBGROUP	Set to null
FULLFIPSID	Populated from Census Block FIPS Code
TRANSTECH	Set to 10 (ADSL) per email
MAXADDOWN	Set to code 7 per email
MAXADUP	Set to code 4 per email
TYPICDOWN	Set to null, not provided
TYPICUP	Set to null, not provided
SHAPE	Copied from Census Bureau TigerLine 2000

Internal processing notes:

59. Created a file with a municipality name that matches exactly the “name” column in the Year 2000 Census Bureau TigerLine database.
60. Joined against reference data to discover census blocks, for a total of 681 blocks.
61. All of the census blocks discovered for Lakewood Township are smaller than 2 square miles, so no road segments were loaded.

Section 6: Clarification Questions and Responses

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Wednesday, March 09, 2011 8:34 AM
To: 'Duvid Rottenberg'; 'ConnectingNJ@research.telcordia.com'
Cc: 'Shelley Bates'
Subject: RE:

Duvid,
We can work with that information as far as geography and mapping into Census blocks. What we would need then is information on your speeds and middle-mile interconnection points. In terms of speeds, we are requesting the maximum upstream and downstream speeds you advertise in Lakewood, and the typical upstream and speeds experienced by your customers. For middle-mile interconnection points, we are requesting the address, and the technology and bandwidth you have available and whether you own or lease the trunks.

There is also a small amount of general information we need. Specifically, we need you official company name, and other names you do business as and your FCC FRN number.

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Duvid Rottenberg [mailto:drottenberg@xchangetele.com]
Sent: Tuesday, March 08, 2011 3:36 PM
To: ConnectingNJ@research.telcordia.com

Cc: 'Shelley Bates'
Subject: RE:

John,
We are a UNE-L company, we lease the loop from Verizon and provide broadband for the end user on the leased circuits. I believe we do cover the whole city of Lakewood.

Duvid Rottenberg
Xchange Telecom, Corp.
drottenberg@xchangetele.com
(646) 722-7258

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 08, 2011 3:21 PM
To: drottenberg@xchangetele.com
Cc: ConnectingNJ@research.telcordia.com; 'Shelley Bates'
Subject:

Duvid,
I received the note that you sent to Shelley Bates regarding the questions you have about submitting your broadband availability data. Rather than attempting to answer your question, let me first ask another question that will help determine if you are required to report data at this time. We are currently only collecting data from "facilities-based" providers. NTIA definition is:

An entity is a ''facilities-based'' provider of broadband service connections to end user locations if any of the following conditions are met: (1) It owns the portion of the physical facility that terminates at the end user location; (2) it obtains unbundled network elements (UNEs), special access lines, or other leased facilities that terminate at the end user location and provisions/equips them as broadband; or (3) it provisions/equips a broadband wireless channel to the end user location over licensed or unlicensed.

If you fit the definition, then we would be looking to collect data from you. In that case, we need to come up with a method of determining your coverage area. We do not have a clean way of mapping from COs to census blocks. We do have a couple options:

1. If you could estimate your coverage area in terms of governmental boundaries, we could map that into census blocks. For example, if you know that you cover the entire town/city of Lakewood, we could handle the rest.
2. If you were to send us a list of addresses, we could geo-code those locations. This is less desirable, as where you have customers does not fully represent the locations where you could offer service, but we have done it in some cases.

Let me know how I can help you in determining an approach.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Duvid Rottenberg [mailto:drottenberg@xchangetele.com]
Sent: Tuesday, March 08, 2011 11:41 AM
To: Bates, Shelley

Cc: Michael Robinson
Subject: Xchange Telecom Broadband Service

Hi Shelley,

I am working on providing the data you requested from Michael. Our broadband service is currently available for all customers served by the LKWDNJLKDS5 CO, I'm not sure how to map that into census tracts. I have tried setting up an account at http://connectingnj.state.nj.us but I got an error stating that Xchange Telecom is not a recognized provider.

Thank You,
Duvid Rottenberg
Xchange Telecom, Corp.
drottenberg@xchangetele.com
(646) 722-7258

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
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1. If you could estimate your coverage area in terms of governmental boundaries, we could map that into census blocks. For example, if you know that you cover the entire town/city of Lakewood, we could handle the rest.
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Manager – NJ BB Data Collection
Telcordia Technologies
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Duvid Rottenberg
Xchange Telecom, Corp.
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To: 'Duvid Rottenberg'; 'ConnectingNJ@research.telcordia.com'
Cc: 'Shelley Bates'
Subject: RE:

Duvid,
We can work with that information as far as geography and mapping into Census blocks. What we would need then is information on your speeds and middle-mile interconnection points. In terms of speeds, we are requesting the maximum upstream and downstream speeds you advertise in Lakewood, and the typical upstream and speeds experienced by your customers. For middle-mile interconnection points, we are requesting the address, and the technology and bandwidth you have available and whether you own or lease the trunks.

There is also a small amount of general information we need. Specifically, we need you official company name, and other names you do business as and your FCC FRN number.

Thanks for your participation in the program!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 4:16 PM
To: 'NJ Broadband Data Collection'; 'Duvid Rottenberg'
Cc: 'Shelley Bates'
Subject: RE:

Duvid,
I am sending this again to request data from you on the types of service you advertise. I attempted to gain this information from your Web site, but was unable to get any information on the plans you offer. Could please send me information on the maximum upstream and downstream speeds you advertise in Lakewood? If you have information on the typical upstream and speeds experienced by your customers, that would be useful as well.
Please feel free to call me if you have any questions.

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

From: Duvid Rottenberg [mailto:drottenberg@xchangetele.com]
Sent: Monday, March 14, 2011 4:31 PM
To: ConnectingNJ@research.telcordia.com
Cc: 'Shelley Bates'
Subject: RE:

2 Mbps Upstream and 10 Mbps downstream.

Duvid Rottenberg

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Monday, March 14, 2011 4:46 PM
To: 'Duvid Rottenberg'; 'ConnectingNJ@research.telcordia.com'
Cc: 'Shelley Bates'
Subject: RE:

Thanks for this.

One other question – do you serve both residential and business customers?

John

From: Duvid Rottenberg [mailto:drottenberg@xchangetele.com]
Sent: Monday, March 14, 2011 4:57 PM
To: ConnectingNJ@research.telcordia.com
Cc: 'Shelley Bates'
Subject: RE:

Yes we do.

Duvid Rottenberg

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 18, 2011 10:41 AM
To: 'Duvid Rottenberg'
Cc: 'NJ Broadband Data Collection'
Subject: Xchange NJ BB Clarification

Duvid,
We need to report data using Provider Name, Doing-Business-As Name and FCC Registration number. The information we retrieved from the FCC is:

Provider Name: XCHANGE TELECOM CORP.
FRN: 0006831713

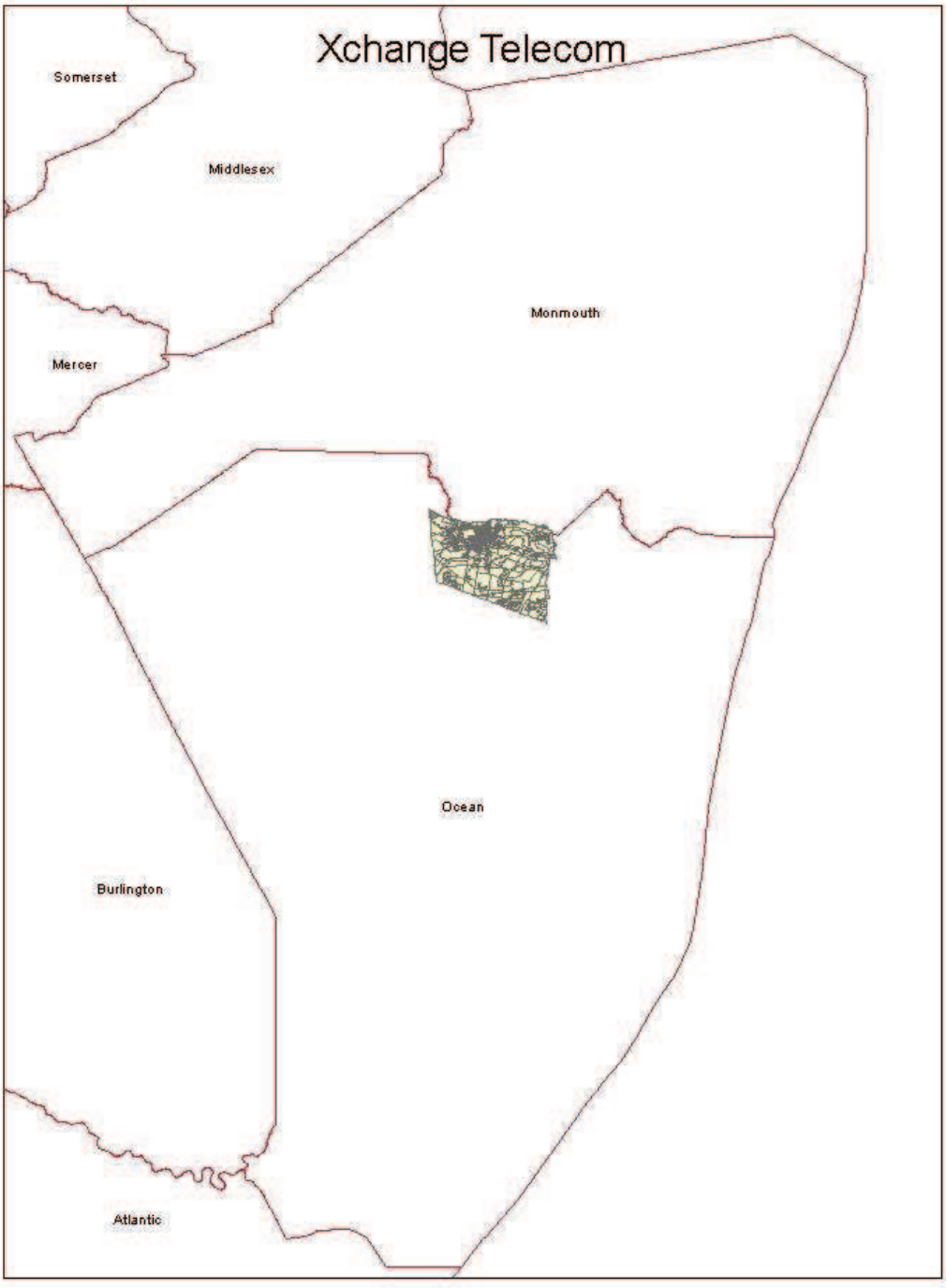
Are these correct? Also, do you have another “doing-business-as” name?

Thanks,

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



Connecting New Jersey - Broadband Provider Data Report

Provider: XO Communications
Submission date: April 2011

This report presents details on processing broadband data for delivery to the National Telecommunications and Information Administration (NTIA). This is a stub report, since data from the previous submission was reused unchanged. The complete report from the previous submission begins on the next page. Notable differences from the processing done on the previous submission are listed next.

NTIA Table BB_Service_CensusBlock

6. Column "reseller" was dropped.
7. Set the new column "provider_type" to value 1 ("Broadband provider as described in the NOFA")
8. Set the max advertised speed code values (down and up) to 9, which is the maximum value among all records provided to us.
9. Dropped non-measured typical up/down speed code values.

Provider Interactions

From: Adams, Sharon E [mailto:Sharon.E.Adams@xo.com]
Sent: Tuesday, March 01, 2011 4:11 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011

Hi John,

I don't have any new data to report.

Thanks,
Sharon Adams

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Tuesday, March 01, 2011 4:23 PM
To: Adams, Sharon E
Cc: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011

Sharon,
Are you saying that we can use the data you submitted last time (that it reflects your network capabilities as of 12/31/2011)?

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies

732-699-2687

From: Adams, Sharon E [mailto:Sharon.E.Adams@xo.com]
Sent: Tuesday, March 01, 2011 4:41 PM
To: ConnectingNJ@research.telcordia.com
Subject: RE: NJ BB Data Collection - Spring 2011

Yes, the previous data can be used again.

Thanks,
Sharon Adams

From: NJ Broadband Data Collection [mailto:ConnectingNJ@research.telcordia.com]
Sent: Friday, March 18, 2011 9:34 AM
To: 'Adams, Sharon E'
Cc: 'NJ Broadband Data Collection'
Subject: XO NJBB Data Clarification

Sharon,

We have performed our initial review of your data and have a clarification question:

> We see several locations where your download speeds are a tier 2, which the NTIA does not consider broadband. This appears that it might be the provisioned speed sold to the customer. Is there a higher, advertised speed that you could provision to these locations if the customer asked? One option would be for us to use the highest speed you deliver in a larger area as the maximum advertised speed. Would that accurately represent your ability to deliver service?

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Broadband Provider Data Report

Provider: XO Communications
Received: August, 2010
Submission date: October 2010

This report presents details on processing of the broadband data for delivery to the National Telecommunications and Information Administration.

Sections:

205. NDA Status
206. Submission Overview
207. Submission File Details
208. Data Validations and Results
209. Data Transformation and Loading
210. Clarification Questions and Provider Responses
211. Notes and Open Issues

Section 1: NDA Status

Executed.

Section 2: Submission Overview

<table>
<tr><td colspan="4">AVAILABILITY DATA</td></tr>
<tr><td>ID</td><td colspan="2">Provider name
“Doing business as” name
FRN</td><td>XO Communications, LLC
Provided, but looks weird
0006275945</td></tr>
<tr><td colspan="4">FOR WIRELINE</td></tr>
<tr><td>Filetypes</td><td colspan="3"></td></tr>
<tr><td>File size</td><td colspan="3"></td></tr>
<tr><td>Speeds</td><td colspan="3"><table>
<tr><td>Type</td><td></td><td>Spatial Resolution (address, street seg, census block, RSA/MSA, zipcode,etc)</td></tr>
<tr><td>Typical-upstream</td><td></td><td>census block</td></tr>
<tr><td>Typical-downstream</td><td></td><td>census block</td></tr>
<tr><td>Advertised-upstream</td><td></td><td>census block</td></tr>
<tr><td>Advertised-downstream</td><td></td><td>census block</td></tr>
<tr><td>Subscriber-weighted-up</td><td></td><td>Not provided</td></tr>
</table></td></tr>
</table>

	Subscriber-weighted-down		Not provided	
Technology Type	Entered codes 1, 2, and 3, which are not valid NOFA TechTrans codes.			
End-user specification	Business (444 entries), Residence (5 entries)			
Comments:				
INTERCONNECTION DATA				
ID				
File size				
Ownership				
Transport Type				
Data Rates/Capacity				
Location				
Comments: Not provided				

Section 3: Submission File Details

Received 1 file by SECURE UPLOAD.

Size	Name
41358	NJBroadbandData63009.xlsx

Section 4: Validations and Results

The spreadsheet provides census block IDs and associated max adv and typical speeds. The last two rows of the sheet are different from the 447 data rows proceeding them, and one of those last two is in New York. The DBA name looks unusual and the technology of transmission codes are not valid. After receiving clarification by email we created a corrected spreadsheet based on the original submission as follows:

1. Dropped the last two rows that have addresses instead of provider name, DBA name, etc.
2. Changed DBA Name entries to “XOCSI”
3. Changed technology of transmission codes: 1 to 10, 2 to 20, and 3 to 30.

Section 5: Data Transformation and Loading

NTIA Table BB_Service_CensusBlock

Loaded from the supplied spreadsheet. The following table explains the transformations that were applied to load the target table.

Table Column	Data Source / Transformation
PROVNAME	As supplied in column "Provider Name"
DBANAME	As supplied in column "DBA Name"
RESELLER	Set to "N"
FRN	As supplied in column "FRN", after adding leading zeros
STATEFIPS	Set to "34" (NJ)
COUNTYFIPS	Populated from column census_block (1st 3 digits)
TRACT	Populated from column census_block (next 6 digits)
BLOCKID	Populated from column census_block (last 4 digits)
BLOCKSUBGROUP	Set to null
FULLFIPSID	As supplied in column census_block
TRANSTECH	As supplied in column Tech Code
MAXADDOWN	As supplied in column MaxDownload
MAXADUP	As supplied in column MaxUpload
TYPICDOWN	As supplied in column TypDownload
TYPICUP	As supplied in column TypUpload
SHAPE	Copied from Census Bureau TigerLine 2000, As matched by Census block ID

Internal processing notes:

1. No duplicate census blocks were found.

Section 6: Clarification Questions and Responses

1. The file name suggests the data are from June 30, 2009. We need data from June 30, 2010 for this submission.
2. The DBA name is provided as "XO Communications Services, Inc. (Affiliated Entity)" which seems unusually lengthy for a DBA name. Should it be reported simply "XO" or "XO Communications"?
3. The technology codes 1, 2, and 3 are not known to us. Do you mean 10 (ADSL), 20 (SDSL), and 30 (Other Copper)? Please refer to the NOFA technical appendix for valid technology of transmission codes (page numbered 32558, physical page 14): http://www.ntia.doc.gov/frnotices/2009/FR_BroadbandMappingNOFA_090708.pdf
4. The typical and maximum down speeds always match, and the typical and maximum up speeds always match each other also. We are expecting typical user speeds and maximum *advertised* speeds. It seems unlikely that you have so many different maximum advertised speeds. Did you report the provisioned speeds here? Please clarify.

5. Some rows show speed code 9 (Greater than or equal to 50 mbps and less than 100 mbps), which seems more likely to be a fiber technology than copper. Please recheck, or help us understand what copper technology supports this speed over a long distance.
6. We believe you have submitted Census Block 2000 codes to us, because every entry is length 15; none are length 16. Please confirm.
7. The last two rows of the submission are different from the 447 data rows proceeding them, and one is in New York. We will discard these rows:

437 PARK AVE	PLAINFIELD	NJ	07060	Business
1401 MAIN ST	PORT JEFFERSON	NY	11777	Business

8. We received no connection point (middle-mile) data. Will you submit that?
9. We did not receive data on subscriber weighted nominal speeds, separated by county. Will you submit that?

From: Adams, Sharon E [mailto:Sharon.E.Adams@xo.com]
Sent: Thursday, September 16, 2010 4:57 PM
To: Wullert, John R II
Subject: RE: XO NJBB Data Questions/Clarifications

John,

I am rechecking the data for question 5 and will provide the answer in the morning.

Sharon

We have been reviewing the data you submitted to the New Jersey Broadband mapping program. Based on our initial review, we have some questions for you that will help us better understand the data and process it accurately.

1. The file name suggests the data are from June 30, 2009. We need data from June 30, 2010 for this submission. Can you confirm that this data is actually for 2010? **Provided June 30, 2010 data**
2. The DBA name is provided as "XO Communications Services, Inc. (Affiliated Entity)" which seems unusually lengthy for a DBA name. Should it be reported simply "XO" or "XO Communications"? **It can be shortened to XOCSI.**
3. The technology codes 1, 2, and 3 are not known to us. Do you mean 10 (ADSL), 20 (SDSL), and 30 (Other Copper)? Please refer to the NOFA technical appendix for valid technology of transmission codes (page numbered 32558, physical page 14): **10, 20 and 30 would be the correct codes for 1, 2, and 3 respectively.**
http://www.ntia.doc.gov/frnotices/2009/FR_BroadbandMappingNOFA_090708.pdf
4. The typical and maximum down speeds always match, and the typical and maximum up speeds always match each other also. We are expecting typical user speeds and maximum *advertised* speeds. It seems unlikely that you have so many different maximum advertised speeds. Did you report the provisioned speeds here? Please clarify. **XO does not have advertised speeds for these services, so I populated those fields with the same data.**
5. Some rows show speed code 9 (Greater than or equal to 50 mbps and less than 100 mbps). We would like to clarify – does this represent T3 links over copper?
6. We believe you have submitted Census Block 2000 codes to us, because every entry is length 15; none are length 16. Please confirm. **I did submit data from the 2000 codes.**

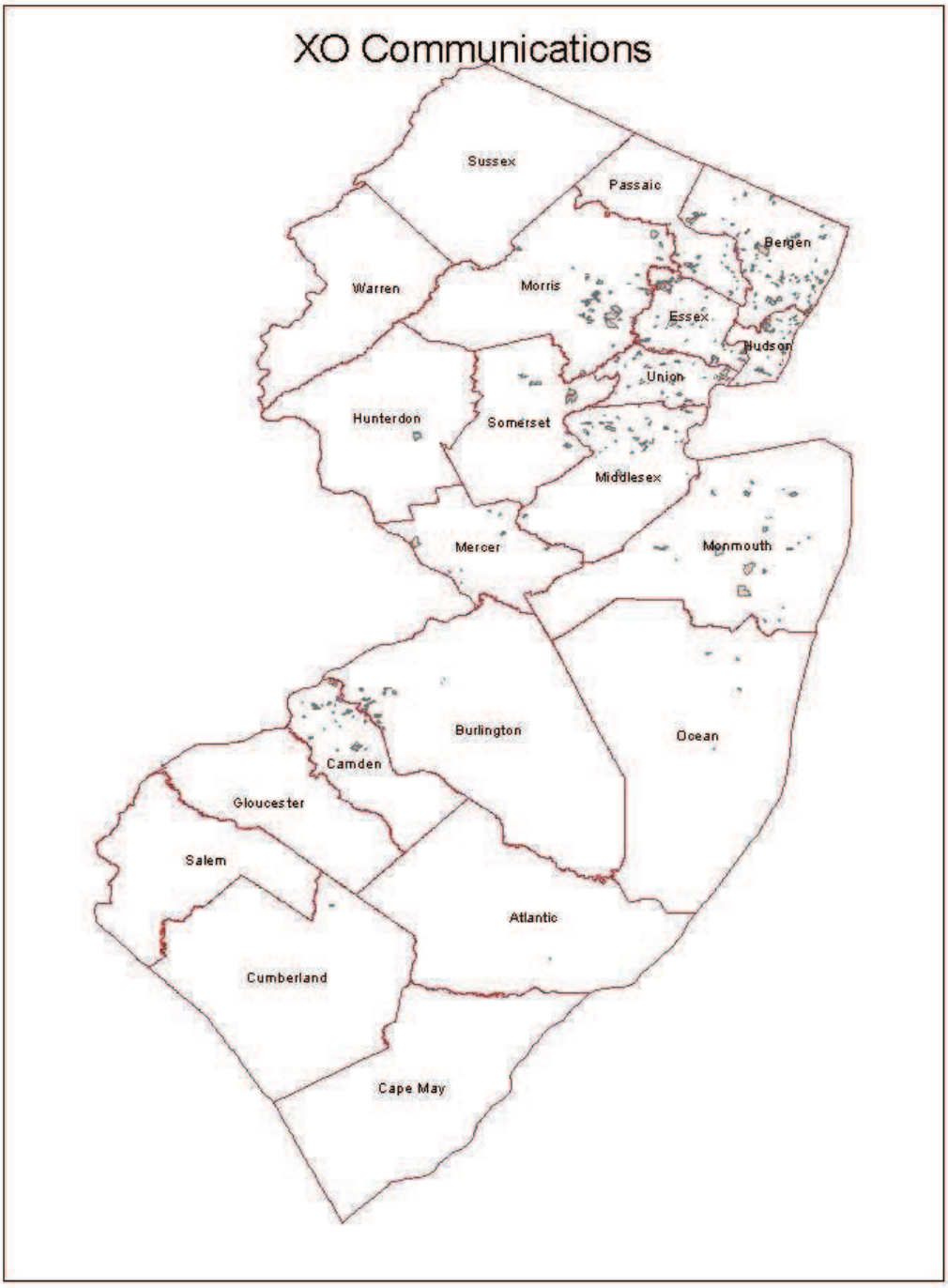
We would appreciate your prompt attention to these questions. If you need further clarification, please feel free to contact me.

Thank you for your participation!

John Wullert
Manager – NJ BB Data Collection
Telcordia Technologies
732-699-2687

Section 7: Notes and Open Issues

Section 8: Overview Map of Submitted Data



APPENDIX B:

Community Anchor Institution Processing

Summary

For each category of community anchor institution, we generally sought data from two types of sources. One source was a reference source that provided a more-or-less current list of institutions with name, address and ID number (where applicable). This reference source was expected to be nearly complete, representing all the institutions of the specified type in the state. Reference sources are listed where available in the table below. For some CAI categories, we had no reference list, e.g., for local government and non-governmental organizations.

The second type of source provided the broadband information. In most cases, the broadband information was supplied individually by the institutions via our Web site. In two cases, the broadband information was provided in aggregate:

- In the case of Higher Education, we obtained broadband access information from NJEdge, an organization that provides broadband service to institutions.
- In the case of State Government, we obtained a list of broadband circuits provided to the state by Verizon.

For each CAI category, the following table provides the number of records we obtained from the reference source, the number of broadband access records we obtained, the total number of records we submitted to the NTIA and the number of complete records, with verified address information and broadband access information.

CAI Category	Reference Records	Broadband Records	Total Records Submitted	Complete Records Submitted
School K-12 (Public)	2601	549 (230 of these records require further processing and verification)	2601	158
School K-12 (Private)	1260 (NCES)		1260	71
Libraries	427 (IMLS)	89	427	87 (2 library web submissions were unmatched)
Medical/Healthcare	111 (NJHA)	5	111	5
Public Safety	343 (NJ 911 Comm.)	99	343	88 (11 PSAP web submissions were unmatched)
University	157	38	157	37

CAI Category	Reference Records	Broadband Records	Total Records Submitted	Complete Records Submitted
	(NCES IPEDS)	(NJEdge)		(1 entry for was unmatched)
Other – State Government		2700	500 (Remaining data to be analyzed and verified for next submission)	500
Other – Local Government	0	45	45	45
Other – Non Government	0	8	8	8
Total Submitted			**5452**	**999**

Abbreviations and Acronyms

911 Comm	New Jersey 9-1-1 Commission
IMLS	Institute of Museum and Library Services
IPEDS	Integrated Postsecondary Education Data System
NCES	National Center for Education Statistics
NJHA	New Jersey Hospital Association

Detailed Processing

The following sections contain detailed descriptions of the data we received and the processing steps we applied to the data in order to generate the NTIA submission.

Local Government and Non-Government Organizations

1. Accepted data submitted by 45 local government and 8 non-governmental organizations via specially designed Web site. Data collected included:
    i. Community Anchor Institution Category
    ii. Community Anchor Institution Name (System, Branch)
    iii. CAI ID information: NCES School ID, NCES IPEDS ID, FSCSKEY, FSCS_SEQ
    iv. Address: Street, City, State, Zip,County
    v. Contact info: Name, Phone, Email, Web address
    vi. Wi-Fi access
    vii. Broadband info: Provider, Technology, Upstream and Downstream speeds
    viii. Comment
2. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.

State Government

1. Obtained a listing of 2700 connections provided by the primary broadband service provider to the state. List of connections included the following data:
    a. Service address
        i. This field included an indication of the office or department being served and an extremely abbreviated version of the address
        ii. e.g.: "(SPNL)STATE OF NJ-TLS 19 LANDIS AV, UP DRFLD T"
    b. Speed (single value, 1.5 to 1000 Mbps)
    c. Technology (ATM, Ethernet, Frame Relay, PRI, Point-to-Point
2. Manually interpreted the address field, using Web mapping tools (e.g., Google Maps), to get corresponding addresses that could be geo-coded
    a. This is a time consuming process and thus we were only able to complete this operation for 500 of the addresses
3. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.

Hospitals

1. Obtained a listing of 111 hospitals from NJ Hospital Association. List of connections included the following data:
    a. Facility Name
    b. Address: Street, City, State, Zip
2. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.
3. Merged NJHA data with data collected from 5 hospitals via our hosted Web site to merge address and ID information with speed and Wi-Fi availability information.
    a. Performed exact match between NJHA and submitted data on institution name
        i. Facilitated matching by Converting names to upper case, removing certain common words (THE, HOSPITAL, MEDICAL, CENTER, SYSTEM, HEALTHCARE), removing double spaces and trimming leading and trailing spaces.

Higher Education

1. Obtained the following data from the named sources
    a. List of higher education institutions from National Center for Education Statistics IPEDS Data Center. Table included information on 157 institutions with the following fields:
        i. Institution Name
        ii. Address: Street, City, County, State, ZIP
        iii. IPEDS ID
        iv. Latitude
        v. Longitude

b. List of members of NJEdge. Table included information on 48 institutions, most of which (38) were state, community or private institutions of higher learning. Information from NJEdge included:
    i. Institution Name
    ii. Address
    iii. Technology Type
    iv. Upstream and downstream speeds

2. Merged IPEDS and NJEdge data to match institution data with broadband access information
    a. Performed exact match on institution name
        i. Facilitated matching by Converting library names to upper case and trimming excess spaces
    b. Of those NJEdge data entries that did not match, used approximate matching based on institution name
        i. Preprocess prior to approximate match involved
            1. Removing strings COLLEGE, UNIVERSITY, NEW JERSEY
            2. Removing any punctuation
        ii. Matched using Levenshtein Distance metric with threshold of 4.
    c. Reviewed unmatched NJEdge data manually and identified one additional match.
3. Successfully merged data from 37 of 38 NJEdge institutions into IPEDS data for total of 157 institutions
    a. Note that remaining NJEDGE institution (Fairleigh Dickenson) has different address than either of the campuses in the IPEDS data.

Libraries

2. Obtained the following data from the named sources
    a. Obtained the file "Public Libraries Survey Fiscal Year 2008" from http://harvester.census.gov/imls/data/pls/index.asp.
        i. Extracted 427 records for the state of New Jersey
        ii. Used the following data items:
            1. FSCSKEY
            2. FSCS_SEQ
            3. LIBNAME
            4. ADDRESS
            5. CITY
            6. ZIP
            7. LATITUDE
            8. LONGITUDE
    b. Data submitted by 89 library organizations via specially designed Web site. Data collected included same fields listed above for Local Governmental organizations
3. Merged library survey data with data collected from libraries via our hosted Web site to merge address and ID information with speed and Wi-Fi availability information.
    a. Performed exact match between survey and submitted data on library name

i. Facilitated matching by Converting library names to upper case, cutting submitted names to fixed-field length of survey data (60 characters) and trimming excess spaces

b. For those submitted data entries that did not match, performed an approximate match based on library name
    i. Preprocess prior to approximate match involved
        1. Removing strings “P.L.”, “FREE”, “PUBLIC”, “LIBRARY”, TOWNSHIP, TSWP, PUB, LIB, THE, SYSTEM
        2. Removing any punctuation
        3. Converting “NO”/”SO” at start of line to NORTH and SOUTH respectively
    ii. Matched using Levenshtein Distance metric with threshold of 3.
c. Successfully matched all but two submitted entries
    i. Manual comparison showed that those libraries were not present in the survey data.

Private K-12 Schools

1. Obtained the following data from the named sources:
    a. List of private K-12 education institutions from National Center for Education Statistics Private School Universe Survey. Table included information on 1260 institutions with the following fields:
        i. Name
        ii. Address: Street, City, State, ZIP
        iii. NCES_ID
    b. Data submitted by schools via specially designed Web site. Data collected included same fields listed above for Local Governmental organizations. Total number of Public and Private schools submitting information was 549.
2. Merged NCES private school with data collected from private schools via our hosted Web site to merge address and ID information with speed information.
    a. Performed exact match between NCES and submitted data on institution name
        i. Facilitated matching by:
            1. Converting library names to upper case
            2. Removing string “, NJ”
            3. Converting string SAINT to ST
    b. For those submitted data entries that did not match NCES data, performed an approximate match based on institution name
        i. Preprocess prior to approximate match involved
            1. Replacing string SCHOO or SCHO with SCHOOL
            2. Replacing string “HIGH SCHOOL” with HS and string “ELEMENTARY” with ELEM
            3. Removing strings SCHOOL, THE, REGIONAL, HIGH and ACADEMY
            4. Trimming excess spaces
        ii. Matched using Levenshtein Distance metric with threshold of 3.

c. Successfully merged data from 71 submitted private school into 1260 NCES institutions
    i. Manual comparison resulted in matching of two additional institutions
    ii. Remaining institutions were ambiguous or not present in the NCES data.
3. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.

Public K-12 Schools

1. Obtained the following data from the named sources:
    a. List of public K-12 education institutions from National Center for Education Statistics Private School Universe Survey. Table included information on 2601 institutions with the following fields:
        i. Name
        ii. Address: Street, City, State, ZIP
        iii. NCES_ID
        iv. Latitude, Longitude
    b. Data submitted by schools via specially designed Web site. This was entries in the school category that did not match any of the NCES private schools. Total number of Public and Private schools submitting information was 549.
2. Merged NCES private school with data collected from private schools via our hosted Web site to merge address and ID information with speed information.
    a. Performed exact match between NCES and submitted data on institution name and zip code
        i. Facilitated matching by:
            1. Removing SCHOOL and all truncated versions of the word from the ends of any string
            2. Performing the following conversions
                a. "SENIOR HIGH" and HIGH to HS
                b. "MIDDLE", "M S", "MID" and "MIDD" to MS
                c. "ELEMENTARY" to ELEM
                d. CHARTER to CS
                e. BOROUGH to BORO
                f. AVENUE to AVE
                g. TOWNSHIP to TWP
                h. STREET to ST
            3. Removing the strings REGIONAL, " REG" and ACADEMY
            4. Removing punctuation and double spaces
            5. Trimming any leading or trailing spaces
    b. For those submitted data entries that did not match NCES data, performed an approximate match based on concatenation of institution name and zip code
        i. Preprocess prior to approximate match involved
            1. Removing the following phrases

a. “BOARD OF EDUCATION” and all truncated versions
b. BOE
c. DISTRICT and all truncated versions
d. PRIMARY, INTERMEDIATE, ELEM, MS, HS, SR, JR
e. # or any digits
f. PUBLIC

2. Trimming excess spaces

ii. Matched using Levenshtein Distance metric with threshold of 2.

c. For those submitted entities that did not match NCES data in either prior stage, performed manual comparison.
d. Successfully merged data from 158 submitted entries into 1260 NCES institutions
    i. Remaining institutions were ambiguous or not present in the NCES data.
    ii. One particular issue was information submitted for a district that did not correspond to a specific school

3. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.

Public Safety Organizations

1. Obtained the following data from the named sources:
    a. List of local and state public safety organizations obtained from NJ State 911 Commission. Table included information on 343 institutions with the following fields:
        i. Name
        ii. Address: Street, City, State, ZIP, County
        iii. NCES_ID
    b. Data submitted by 104 public safety organizations via specially designed Web site. Data collected included same fields listed above for Local Governmental organizations
2. Merged 911 Commission data with PSAP data collected from via our hosted Web site (99 entries) to merge address and ID information with speed information.
    a. Performed exact match between 911 and submitted data on institution name
        i. Facilitated matching by:
            1. Converting names to upper case
            2. Removing the Strings DEPARTMENT, DEPT, TOWNSHIP, TWP
            3. Removing punctuation
            4. Replacing string PD with POLICE and string BOROUGH with BORO
    b. Performed manual merging to integrate submitted records that were not matched.
        i. Successfully merged 88 submitted PSAP entries with 911 Commission data.
3. Generated Latitude and Longitude via geo-coding using Yahoo geocoder API.
    a. Ensured no errors were present, that at least on entry was returned and that quality metric was over 75.